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ABSTRACT

A survey of 166 employed persons with visual impairments investigated major barriers to employment, how these barriers were overcome, and their perceptions on why they were successful in overcoming barriers when many individuals are not successful. Results of the survey indicate that the primary barriers to employment were employer attitudes, transportation and mobility problems, print access, adaptive equipment and accommodations, and lack of job opportunities. Approximately 44 percent of the participants attributed their employment to successful networking with coworkers, customers, and others rather than to a service delivery system. Approximately 40 percent of consumers attributed their ability to become employed to their own direct business contacts through cold calls to employers, job fairs, and other methods. A much smaller number attributed their employment to assistance from government agencies, rehabilitation providers, or school personnel. The need for national policy changes or initiatives to overcome barriers to employment for individuals with visual impairments is urged. Recommendations include an aggressive public awareness campaign by the Equal Employment Opportunity Commission with regard to complaints filed under Title 1 of the Americans with Disabilities Act to help make employers more aware of their responsibilities. (Contains 70 references.) (CR)

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Introduction

Persons with severe visual impairments continue to be substantially underrepresented in the competitive labor market despite persistent efforts by the Rehabilitation Services Administration (RSA), policy makers, service providers, and consumers. The stagnant growth of this sector of the labor market prompted the National Institute on Disability and Rehabilitation Research to establish a research priority to identify barriers to employment that can be addressed by rehabilitation service providers or employers, and to develop or identify rehabilitation techniques or reasonable accommodations that address these barriers. In response to this priority, the Rehabilitation Research and Training Center (RRTC) on Blindness and Low Vision at Mississippi State University developed a multi-phase research project designed to (a) identify barriers to employment, (b) identify and develop innovative successful strategies to overcome these barriers, (c) develop methods for others to utilize these strategies, (d) disseminate this information to rehabilitation providers, and (e) replicate the use of selected strategies in other settings. This monograph represents the first part of this research project (i.e., to identify barriers to employment that can be addressed by rehabilitation service providers or employers).

Efforts to identify barriers to employment began with a comprehensive review of the literature of both blindness-related literature and general rehabilitation literature, both published and unpublished. This review also included information from two national conferences sponsored by the RRTC and the American Foundation for the Blind (AFB). Every effort was made to gather information from the perspective of rehabilitation service providers, consumers, and employers. Thus, a broad-based view of barriers to employment was collected and summarized, as well as issues of overlapping concern.

A mail survey was distributed to a sample of employed persons with disabilities who are registered on the RRTC National Consumer Feedback Network (NCFN) and the AFB Careers and Technology Information Bank (CTIB). These consumers provided information regarding current barriers to employment, successful strategies that were utilized to assist them in overcoming barriers, and suggestions to others who are seeking employment.

Literature Review

Although work is a central activity in the lives of most adult Americans, persons with visual disabilities continue to be underrepresented in the competitive labor market. This underrepresentation demonstrates the need for research identifying and addressing barriers to participation in the competitive job market. Efforts to identify and address these barriers have been made, but were typically fragmented in scope and purpose. Furthermore, previous research has addressed either local or regional concerns, or only the opinions of selected parties within the rehabilitation or employment arena. A comprehensive assessment of barriers to employment, encompassing the experiences of rehabilitation consumers, providers, and employers is not available. Nor is there any organized framework within which to address methods of overcoming these barriers.

This literature review draws together research about barriers to employment in the lives of adults with visual impairments. The discussion is organized according to the rehabilitation service provider's perspective, the consumer perspective, the employer perspective, integrated perspective, sociodemographic issues, policy issues, and technology issues.

Rehabilitation Service Provider Perspective

Moore and Wolffe (1997) summarized a list of barriers that rehabilitation professionals and researchers consider significant contributors to the underrepresentation of persons with visual impairments in the labor market. These barriers included (a) negative attitudes of employers toward people with visual impairments; (b) lack of employment and employment-related skills; (c) lack of motivation for employment; (d) government-generated work disincentives, such as entitlement programs that provide welfare or disability benefits; (e) lack of housing and family supports; (f) lack of transportation; and (g) lack of access to information.

Moore and Wolffe (1997) recommended that rehabilitation professionals become and remain informed about the problems faced by persons with visual impairments with no work history. They must also remain current on adaptive techniques used to sustain employment and career path changes due to a disability. Although the work of the rehabilitation counselor is recognized as integral to successful return to work, the ultimate responsibility of locating and sustaining a job rests with the consumer. Other strategies to promote successful employment of persons with low vision include completion of a consumer self-analysis, job analysis, and discrepancy analysis; development of interviewing skills; assessment of functional vision skills; and the use of job modifications.

Maxson, McBroom, Crudden, Johnson, and Wolffe (1997) reported the results of a rehabilitation services personnel workgroup that identified 10 specific problem areas affecting employment outcomes for blind or visually impaired clients, all relating to providing training for rehabilitation service providers. Proposed solutions included improving existing training programs and creating new programs to provide specific types of training.

Dahl's (1982) research identified barriers to employment for people with severe disabilities and offered strategies for vocational guidance counselors to help their clients overcome barriers. The author cited unrealistic attitudes and opinions of society, lack of

employer knowledge about people with disabilities, and clients' low expectations as central barriers to be addressed. Possible solutions to these barriers include assisting disabled people in acquiring competitive skills and job competencies, educating employers about these competencies, and offering supportive counseling. Inadequate skill development can be addressed by careful assessment of client strengths, weaknesses, and vocational preferences, and by providing work opportunities that offer challenges and opportunities for success. Problematic physical environments can be overcome by providing clients with alternative transportation resources, educating builders about appropriate accessibility guidelines, and by educating clients about assistive devices. Communication problems can also be addressed by assistive devices.

The American Foundation for the Blind conducted a study to identify barriers that rehabilitation professionals experience when providing services, including placement and employment, to persons with visual disabilities (Link, 1975). Rehabilitation service providers identified seven barriers to placement and employment: (a) caseloads that are too heavy and overemphasize case closures; (b) increasing numbers of consumers with multiple disabilities who are seeking services; (c) over-utilization of segregated employment settings; (d) personal, social, and vocational skill deficits in people with visual disabilities; (e) lack of understanding of employment options and demands; and (f) the negative impact that financial work disincentives, such as SSI and SSDI, have on placement and employment outcomes.

Potential solutions to unmet needs were also identified: (a) additional research to identify the numbers and characteristics of the population with visual disabilities; (b) increased utilization of community vocational and technical programs; (c) increased training of rehabilitation service providers in placement skills and techniques; (d) increased recognition of placement as a skilled and professional activity; (e) improved programs to evaluate consumer skills; (f) increased client participation in community vocational education or employment training programs; (g) increased post-employment services; (h) development of public awareness activities to promote a positive image of persons with visual disabilities; and (i) increased emphasis on coping, daily living, and personal skills training among persons with visual disabilities (Link, 1975). In addition to these issues of national concern, specific regional issues were identified encompassing educational preparation programs for persons with visual disabilities, training for rehabilitation professionals, dissemination of placement information, and cooperation with labor unions.

In a discussion of the views of rehabilitation professionals employed in private agencies, Hopf (1991) stated that some rehabilitation professionals may not generate realistic vocational goals with some persons pursuing college training and that college graduates who are visually impaired may not be held to the same standards as sighted peers. The perceived failure of the educational system to provide adequate training in job readiness skills and basic adaptive techniques is another barrier to competitive employment. Private agencies attempt to overcome these barriers by providing services to remediate educational and personal skills training deficits and by utilizing a supported employment model to improve vocational readiness. Public agencies could incorporate this approach into their service delivery system.

Roessler (1989) examined how motivation to return to work or to retire after sustaining a disability is influenced by the probability of a successful return to work, the importance of work

and the commitment of the worker to her/his career, and any financial repercussions. Successful rehabilitation service providers examine each issue with every consumer. The consumer must have the necessary information and skills to make an individual choice to continue employment.

The Oregon Commission for the Blind conducted focus groups with rehabilitation counselors to discuss factors contributing to job placement success (Young, 1996). Characteristics identified by the group included (a) having a positive attitude; (b) involving consumers in decision-making; (c) promoting networking opportunities for rehabilitation service providers, both on and off the job; (d) providing consumers with positive role models, mentors, and peer support; and (e) being open to a wide array of vocational possibilities. Counselors must demonstrate their belief that persons with visual impairments can succeed in employment and must convey their high expectations to consumers. The ability of consumers to adequately perform skills of daily living, including reading, writing, and traveling, was cited as integral to consumer employment success. Counselors stated that success depends on flexibility, taking responsibility for the placement process, and tenacity in efforts to place consumers.

The Pittsburgh Blind Association established a program to increase competitive employment opportunities and to provide job site support for clients with severe visual impairments (Apter, 1992). Included in the program were comprehensive case management and long-term support, as well as client advocacy. Service providers conducted comprehensive job analyses, including on-site employer interviews, task analyses, and assessments of the visual requirements of the job, and developed appropriate job matches from this data. Program participants were trained by primary and secondary on-site employment training specialists in skill acquisition, generalization, and maintenance. Specialists also provided advocacy for clients in areas of social integration, mobility, and community support. All 26 program participants were successfully employed within a 24-month period.

One opportunity for employment that is often overlooked by vocational rehabilitation counselors is self-employment. Arnold, Seekins, and Ravesloot (1996) found that self-employment is more likely to be used to close cases in rural areas. The authors indicated that socioeconomic factors, such as low population densities, high unemployment rates, low education levels, low wages, and a distinct rural culture provide barriers to successful employment for people with disabilities in rural areas. Self-employment is often a viable option for these clients, but one that urban counselors may overlook. Ravesloot and Seekins (1996) confirmed that, while self-employment is growing in the general population, this trend was not seen in the disabled population. The authors found that vocational rehabilitation counselors' attitudes were a direct result of the past successes of using self-employment. Rural counselors had more success using self-employment with their clients than urban counselors and are, therefore, more likely to consider self-employment as a placement option.

There is general agreement among rehabilitation professionals about many of the barriers previously noted. The most commonly cited barrier was clients' lack of skills and education when applying for vocational rehabilitation services. Other agreed upon barriers include government-sponsored work disincentives, clients' lack of access to employment and labor information, and the dearth of available role models to help new clients. Heavy caseloads and adaptive modification problems round out the list.

Consumer Perspective

In the first year after passage of the Americans with Disabilities Act of 1990, 611 workers who are blind or visually impaired filed complaints under Title I about employment discrimination (Rumrill & Scheff, 1997). Unlawful terminations were the chief complaint, followed by employer refusal to provide appropriate accommodations. Other complaints spanned the following categories: (a) harassment, (b) promotion, (c) discipline, (d) layoffs, (e) wages, (f) benefits, (g) suspensions, and (h) other. The authors contend that individuals who are blind or visually impaired must take a more active approach in correcting job difficulties. They recommend non-adversarial collaborative approaches to discussing disability needs with employers. First, employees should identify barriers and strategies for removal. Next, workers should initiate dialog with employers, disclose the disability, and request that employers consider their needs. In fact, employees are not eligible for accommodations under Title I if employers are not notified of their disability. After the employee has identified disability-related needs to the employer, it is up to the employee to help implement solutions with the cooperation of the employer. The authors suggest that many barriers to current employment concerning accommodations can be ameliorated through this approach.

Salomone and Paige (1984) researched barriers to employment from the view of consumers with visual disabilities who were not successful in retaining competitive employment. The most common barrier identified by participants was lack of knowledge among the general public about the scope and variety of mental and physical capabilities of persons with visual impairments. Other issues identified by consumers included (a) lack of successful personal and vocational experiences contributing to a positive self-concept among persons who are blind or visually impaired, (b) employer resistance to hiring persons with disabilities, (c) transportation difficulties, and (d) insufficient vocational training and career planning experience. Secondary considerations included the state of the economy, educators' insensitivities to the needs of students with visual impairments, lack of successful role models who are visually impaired, lack of information about recreational opportunities and consumer awareness groups, unfamiliarity with vocational potential, attitudes of rehabilitation service providers, and inadequate numbers of rehabilitation service providers.

Increased awareness activities were cited as integral to improving public perceptions of personal and vocational abilities of persons with visual disabilities (Salomone & Paige, 1984). Peer-mentoring, parent training, and increased educator training were strategies recommended to promote more positive self-concepts among persons with visual disabilities. Other suggestions to promote successful employment were (a) giving rehabilitation service providers financial incentives for placements, (b) increasing the use of non-government-connected resources, (c) using high-technology equipment, (d) involving employers who have had successful experiences in hiring persons with visual disabilities, and (e) developing and using materials for employers which depict persons with visual impairments functioning successfully on the job.

Malakpa (1994) identified several barriers to employment for people with visual impairments and additional disabilities. Of the 32 respondents, all rated inadequate transportation resources as the most important barrier to successful employment. Also noted as barriers were (a) difficulty in locating appropriate jobs, (b) lack of long-term job coaches, (c)

inadequate funding for on-the-job assistive technology, (d) communication difficulties with employers and coworkers, (e) lack of vocational counselors and outreach workers, (f) inadequate public education, and (g) limited employer cooperation. Other barriers were overprotection by significant others, difficulties with self-care, low self-confidence, and lack of interpersonal skills.

In another study examining consumer concerns about employment issues, members of the American Council of the Blind were surveyed regarding their experiences with rehabilitation service delivery systems (Wolffe, Roessler, & Schriner, 1992). Respondents indicated that improved services were needed in the areas of (a) skill development in job search strategies, (b) education about career opportunities, and (c) resources for purchasing assistive devices.

College graduates with visual impairments who successfully obtained employment identified the following problems during their transition from school to the workforce: (a) locating transportation; (b) accessing signs, diagrams and charts in the workplace; (c) discrimination due to their visual impairment; (d) difficulty accessing computers; (e) inadequate time management skills; (f) lack of opportunities for participating in recreational or athletic activities; and (g) feelings of loneliness (McBroom, 1995). Employees indicated a general feeling of being unprepared for the demands of work and needing additional training and information.

In a study examining the psychosocial factors associated with vocational adjustment, Bolton (1983) identified several factors that impede to the vocational adjustment of former Arkansas vocational rehabilitation clients. The 211 subjects indicated that good emotional health status, supports from family or significant others of career goals, optimistic attitudes about employment prospects, and environmental attribution of problems encountered (i.e., physical barriers), rather than attributions of a personal nature (i.e., attitude), are the factors influencing positive adjustment to working while disabled. A key area to be addressed by rehabilitation counselors is the area of client perceptions about employment.

The Oregon Commission for the Blind sponsored a focus group of persons who are legally blind and successfully employed to discuss the factors important to their employment (Young, 1994). The factors included (a) adherence to a positive attitude, valuing work and spirituality; (b) belief that they must cope with a sighted world, must educate the public, and must develop leisure skills and positive personal relationships with persons who are blind and sighted; (c) mastery of adaptive techniques for travel, communication, and basic living activities; and (d) the use of role models and mentors. The group recommended that rehabilitation service providers promote maximum opportunity for each consumer, providing training in adaptive techniques, and fostering role modeling and mentoring through recreational programs.

Schriner and Roessler (1991) report on an effort to create a database about the employment concerns of people with disabilities and to develop an agenda for policy and program improvements. Three respondent groups included people with disabilities, people with developmental disabilities, and college students with disabilities. Elements for success, as reported by the 178 respondents with epilepsy, included encouragement to take control of their lives and to train for chosen professions, being treated with respect by service providers, personal confidence in their potential to work, having access to placement assistance, being helped to develop their own job search skills, and encouragement to return to work after an injury or illness. The most common problems were difficulty in being able to get and keep a good job,

inadequate health insurance, lack of opportunities to transfer within a company due to disability, being treated unfairly as a job applicant, having less access to training and advancement, inadequate information about Social Security programs, and limited ability to affect public policy. Respondents with developmental disabilities had difficulties with sick leave arrangements, use of free time, opportunities to advance at work, opportunities to choose work hours, family support of work, and availability of vacation benefits.

College students with disabilities were analyzed separately from Gallaudet students (Schriner & Roessler, 1991). Gallaudet students identified perceived ability to get and keep a good job, campus accessibility, encouragement to stay in school and take control of their lives, and encouragement to have confidence in their futures as strengths. Problems reported by Gallaudet students included not being well trained for careers, lack of college financial assistance, lack of encouragement to prepare for a varying range of jobs, and lack of emphasis on selecting appropriate careers. The other students added opportunities and respect as strengths, and student career resources, preparation, and employment as weaknesses.

Lack of awareness of available resources has also been cited as a barrier to gainful employment. Louis Harris and Associates conducted a nationwide telephone survey of the opinions of 1,219 older adults who are visually impaired for The Lighthouse (1995). More than one third of the respondents reported not knowing if services were available, and an additional 21% reported that there were no such services available in their communities. The elderly and the least educated had a more pronounced lack of awareness of services. The most debilitating barrier was the inability to read standard print.

In a study to determine career-maintenance difficulties, Rumrill, Schuyler, and Longden (1997) profiled five individual cases of professionals who are blind regarding on-the-job accommodations for worksite accessibility, performance of essential job functions, job mastery, and job satisfaction. Most barriers were related to blindness, although some were shared with non-disabled coworkers. Respondents reported that worksite accessibility was fair; however, improvements were needed in the following areas: identification signs for doors, offices, and elevators; public transportation; passenger loading zones; flooring; ventilation; public phones and restrooms; telephones; lighting; hallways; and warning devices and Braille signage for evacuation routes. Problems related to essential functions of the job included a slowed work pace due to the use of assistive technology; difficulties in sequencing and organizing tasks; transportation to off-site meetings; standing and walking for long periods; emphasis on seeing and hearing; heavy lifting; reading written instructions; inadequately labeled wet floors; humidity and cold during outdoor work; and accrual of sick leave, flextime or compensatory time. Respondents also cited the inability to discern obstacles in pathways, dust and odors, and deadline stresses. Job mastery concerns were related to long-term career plans, understanding what was expected of the worker, and having proper resources to do the job.

Respondents offered suggestions to overcome transportation barriers: ride with co-workers, improve public transportation, and work from home (Rumrill et al., 1997). Accommodations for paperwork barriers included personal assistants, dictation machines, and direct communication with other offices within the workplace. Accessibility barriers could be improved by identification lines in bright paint, installation of clearly marked ramps, and assistance in outside work. Other accommodations included glare-guards for computer monitors;

blinds for windows; and extensive Braille labeling of entrances, exits, emergency procedures, bathrooms, and other workplace facilities.

Sampson (1990) identified attributional styles of individuals who are blind or visually impaired in supported employment and compared them to blind or visually impaired individuals in competitive employment. He found that workers in competitive employment were more likely to attribute both positive and negative events to factors that are under their control. This is believed to have led to successful employment. The workers in the supported employment setting rated positive events as under their control, but attributed negative events to more global causes. The author noted that the attributions of the competitively employed group correlate to more healthy psycho-social functioning and, therefore, lead to more successful employment outcomes.

There is some positive news. In a study comparing the overall workforce in the United States with people who successfully completed a program of rehabilitation and were placed in competitive employment situations, little difference was found in salary levels or types of jobs chosen by workers (Walls & Fullmer, 1996). Rehabilitated worker salaries were as high as, and often higher than, starting salaries for their positions as listed in the *Occupational Outlook Handbook*, 1992 Edition. Rehabilitated workers are also just as likely to choose to train in high growth occupations and categories as their non-disabled counterparts. The categories with the most placed rehabilitated workers, however, included lower paying sales and service occupations, and clerical support jobs.

Women. In a study to examine self-perceptions of 41 working-age women with visual impairments, Corn, Muscella, Cannon, and Shepler (1985) found that these women perceive themselves as having more substantial barriers to employment than sighted women, possibly impacting the way they approach employment issues. Women with visual impairments rated the following barriers higher than sighted women in the study: (a) counselor attitude toward skills and lack of belief in own skills; (b) need for safety precautions; (c) employer attitude toward advancement; (d) level of education about the world of work; (e) level of knowledge of legal rights; (f) work experience limiting employment choices; (g) degree of preparation offered in high school; and (h) competition for traditionally male positions. Both women who are visually impaired and women who are not disabled rated lower average pay as a substantial barrier to employment.

Koestler (1983) summarized the major barriers to employment facing women who are blind or visually impaired. These barriers were discussed at a conference addressing education, career needs, and career opportunities of women with visual disabilities. The barriers included (a) a dependent and passive attitude fostered by overprotective parents and reinforced by education and rehabilitation professionals, (b) a timid nature and fear of failure that limits experiences, (c) a tendency to accept decisions made by others for and about themselves, (d) stereotyped views by rehabilitation professionals regarding their abilities, and (e) disincentives that make it more lucrative to remain unemployed or underemployed. Conference participants agreed that women with visual impairments need a strong educational background, ability to utilize technological aids, increased self-knowledge, work experience, career planning assistance and counseling, role models, and support systems.

Research indicates that there is some agreement among consumers as to the most common barriers to employment they experience. Lack of training and education was cited by most respondents, followed by employer attitudes and resistance. Transportation was an issue for most, as was lack of awareness of assistive technology, and awareness of funding sources for technology. Many respondents also noted that lack of previous employment experiences and job search skills presented barriers to employment. These issues must be addressed to insure equal opportunities for employment for individuals who are blind or visually impaired.

Employer Perspective

Employer-based barriers to employment for people who are blind or visually impaired have been in place for quite some time. In 1976, Wacker wrote of a failed vocational placement initiative developing from a vocational independence program. At that time, without the equal rights protection of ADA and Rehabilitation Act amendments, employers essentially ignored attempts to place qualified individuals who were blind or visually impaired. Out of seven firms contacted, only one hired a worker who was blind. Personnel directors stated that the workers did not fit in with corporate structure, other workers did not know how to relate to workers with disabilities, and workers with disabilities could not compete with sighted workers. All responses, the author notes, were fraught with sympathetic negativism, inequality, and pity.

Employer misconceptions even limit job opportunities for people with disabilities who obtain advanced educational degrees in the sciences (Woods, 1996). Unwarranted safety concerns prevent adequate opportunity for these individuals, even though workers with disabilities have safety records that mirror their non-disabled counterparts. In the publication, *Working Chemists with Disabilities*, several successfully employed chemists who are blind or visually impaired were profiled along with the accommodations that allow them to be successful. Accommodations range from a CCTV that benefits non-visually impaired workers, to easily available computer technology.

In a comprehensive study on employer concerns regarding hiring people with disabilities, Greenwood and Johnson (1985) identified several key barriers. All of the respondents who hired people with disabilities agreed that initial reluctance fades as a result of experience. Though the majority of surveyed employers responded favorably to vocational rehabilitation referrals, they noted several areas for referring agencies to consider. Agencies should make sure that both they and their clients understand businesses' needs and operations. Clients also need to be prepared with up-to-date skills training and be ready for the work environment. The employers recommend that referral agencies carefully screen applicants to insure that their abilities match job requirements.

Respondents further noted that the hiring process is fraught with subjective decision making and a disability adds another dimension to the employability estimate (Greenwood & Johnson, 1985). In the application process, employers weigh skills and literacy more heavily than personal factors, but disclosure of a disability raises a red flag; therefore, decisions to disclose on applications should be carefully considered. The job interview is critical because most employment decisions are made there. The ability to explain a disability in functional terms and to demonstrate independent functioning, as well as good communication skills, are vital to a

successful interview. Overall, employers reported that matching the job to a qualified applicant is the most important goal of the hiring process; however, many are unsure how to do this and routinely place workers with disabilities in lower-skilled jobs.

Once they have hired an individual with a disability, employers reported that their concern turns to orientation and integration of that employee (Greenwood & Johnson, 1985). Major topics addressed at this stage include orientation, skills training, accessibility, and accommodations. Most larger corporations have orientation programs, but more need to be implemented across industries. Since most smaller organizations do not have the resources for on-the-job training, immediate job readiness is critical. Since many work site accommodations are not expensive and require little structural change, more employers are taking advantage of the expertise of rehabilitation engineers in improving their workplaces.

Additional employer concerns centered around career maintenance (Greenwood & Johnson, 1985). Respondents expressed concern about employee productivity, flexibility, endurance, supervision, attendance, workforce integration, and fringe benefits. Lack of flexibility in transferring from job to job within a company was a concern, as was the impact of physical and/or mental stress on an individual with a disability. Many employers were concerned that chronic health problems would create extra costs in the areas of health insurance, accident rates, sick leave, and absenteeism.

Employers also indicated that they are generally unaware of resources for accommodations. Most corporations polled by Greenwood and Johnson (1985) do not have a separate affirmative action program for people with disabilities. Some employers used employees with disabilities as consultants, some employed in-house engineers and technicians to design specialized equipment, and others used out-of-office resources. Employers noted that accommodation needs are often overlooked at the time of referral, and recommended encouraging both their personnel office and vocational rehabilitation counselors to more thoroughly explore accommodations. Although many respondents had disability awareness training programs for their management level employees, supervisors and workers did not receive the same training. A business-rehabilitation partnership, in the form of advisory councils, interagency staff training, and supported employment, also helps expand employers' knowledge about employees with disabilities, as well as provides reciprocal relationships between employers and employee referral sources.

Diksa and Rogers (1996) assessed employer attitudes and concerns about hiring individuals with psychiatric disabilities in Suffolk County, MA, an area of approximately 664,000 people. The authors found that employers with a history of hiring people with disabilities expressed significantly less concern about employee work performance and administrative concerns and had more favorable attitudes toward hiring people with disabilities than employers with little or no experience with this population. Employers with less experience in hiring individuals with disabilities rated symptomatology and work personality factors as areas most likely to be of concern. This includes promptness, attendance, reliability, work pride, potential for violent behavior, withdrawal, poor memory and judgement, and incidences of bizarre behaviors. The authors suggest that employers reduce barriers to employment for people with disabilities by simply hiring more workers with disabilities and experiencing success first hand.

In a national study of Fortune 500 corporate executives (Jessop, Levy, & Rimmerman, 1991), attitudes toward employing people with severe disabilities were assessed. Responses to the survey indicated that the majority of respondents had favorable attitudes toward hiring people with severe disabilities. However, only slightly more than half actually hired an individual with a disability in the 3 years prior to the survey.

DeMario (1992) conducted a review of the literature to identify the skills employers need to ensure successful placement and retention of workers with disabilities. Employers rated the following as necessary for successful employment: (a) good work habits, such as dependability and positive attitude; (b) personal and social skills that enable the worker to get along with others; (c) good communication skills; (d) basic skills in math and reading; (e) orientation and mobility skills; and (f) postsecondary training, preferably in the use of computers.

A survey of employers was conducted to determine concerns about employee and employer interests in developing partnerships with rehabilitation service providers to promote employment of persons with disabilities (Greenwood, Johnson, & Schriner, 1988). Employers are more concerned about hiring persons with mental and emotional disabilities than persons with physical disabilities. Employers also indicated an interest in participating in partnerships with entities that produce qualified job applicants, provide technical assistance or financial incentives, and assist in employee retention.

Condon (1987) recommends employers overcome their stereotypes about persons with disabilities by becoming informed about their skills and work abilities. Strategies suggested for overcoming attitudinal barriers include: (a) determining the cost-effectiveness of hiring a person with a disability and making the appropriate job accommodations, including adjusting job demands and physical settings; (b) learning the legal aspects of recruiting, interviewing, and hiring someone with a disability; (c) establishing specific goals and objectives that facilitate success; (d) integrating the worker into the workforce by preparing other staff and providing appropriate supervision; and (e) measuring and evaluating performance on an individual basis.

Beare, Severson, Lynch, and Schneider (1992) described a successful supported employment model developed by a small agency and listed several problems encountered by the staff. The major barrier was termed a "developmental thinking philosophy." This involved the employer's belief that clients must be made ready for specific jobs before they are moved into a community. Other barriers included lack of financial resources, worker dissatisfaction due to job mismatch, age-related employment difficulties, coworker dissatisfaction in the form of resentment and feelings of devaluation, difficulties in interagency collaboration, additional training demands of staff to enable them to make the transition from segregated sites, and lack of benefits for disabled workers.

Turner (1981) asked the question, if sheltered workshops can successfully fulfill business contracts, what is keeping disabled workers out of competitive employment? She noted that a lack of experience with individuals with disabilities is pervasive in industry employers. Turner recommended rehabilitation professionals educate employers in a variety of ways to the efficacy of hiring workers who are disabled. The primary method of educating employers is to have them visit community rehabilitation facilities to view the employees actually engaged in work. Employers can directly observe the abilities of workers, thus encouraging the hiring of personnel to strengthen their placement attempts.

In a study by McBroom (1995), employers of college graduates with visual impairments were asked about the transition of their employees into the workplace. Employers of these graduates typically reported that they (a) wanted to be informed about the visual loss prior to the interview; (b) preferred to be contacted by the applicant directly, rather than by a rehabilitation service provider; (c) were concerned about the applicant's ability to access printed material; (d) preferred to conduct the interview with the applicant, but were amenable to the presence of a sighted guide; (e) were receptive to a dog guide; and (f) were agreeable to providing job accommodations, including travel instruction, orientation to the worksite, access devices, CCTVs, readers, alternate print formats, or adjustment of job duties.

A pervasive theme in the research was the importance of job matching. The majority of employers indicated that the most important attribute for an individual to possess is up-to-date skill training or proper education for the job. Other factors included integration or being able to communicate and get along with other employees, and productivity concerns. Most employers were amenable to hiring an individual with a disability, but most had not. Addressing these and other barriers identified by the research may alleviate this discrepancy.

Integrated Perspective

The Illinois Bureau of Blind Services and AFB conducted a study to determine the issues contributing to successful employment among persons who are blind or visually impaired and living in Illinois (Harkins, Kirchner, Esposito, Chandu, & Istanbouli, 1991; Kirchner, Johnson, & Harkins, 1997). Input was collected from rehabilitation service providers, consumers with visual impairments, and public and private employers. Illinois service providers identified four major issues to overcoming barriers to successful employment among citizens who are blind or visually impaired: (a) improved communication within the agency, and between the agency and consumers and employers (such as providing clients with information about consumer organizations, providing toll-free phone-in service, and conducting more regional staff meetings to examine individual cases); (b) improved access and use of employment-related data by staff and consumers (such as providing information in a variety of formats and connecting the state employment agency's computer system to the provider agency's system); (c) increased marketability of consumers through attainment of stronger employment skills (such as focusing on the literacy of clients seeking employment and improving clients' travel skills); and (d) increased focus by staff on job placement, retention, transition planning, and career enhancement or advancement (such as establishing placement teams in service provider agencies and developing methods to educate eye care professionals on the importance of early referrals).

In the second phase of the Illinois study, consumers were divided into three groups: working, interested in working, and not interested in working (Harkins et al., 1991). Persons uninterested in working were typically older, had lower levels of education, had retirement incomes, lived in small communities, had a later onset of vision loss, and were more likely to have other health problems. Persons interested in work, but not yet employed were more likely than those who were working to have lost their vision in middle or later years, to be experiencing ongoing vision loss, and to have additional health problems. Employed consumers typically had a continuous work history and worked in public agencies or were self-employed. Half of the

employed workers felt they were underemployed. Family support toward work and self-confidence were typically higher among employed consumers, slightly less among those interested in working, and still less among those not interested in employment. In a discussion of three issues influencing job placement (employer attitudes, counselor skills/attitudes, and consumer knowledge about locating jobs), consumers interested in working were more likely to cite employer attitudes and consumer lack of knowledge as barriers than consumers who were employed. Working consumers and those interested in working, cited employer discrimination as a serious problem. Of the three issues, counselor skills/attitudes were cited as least problematic in attaining employment. Consumers interested in employment expressed a need for job-seeking skills training; placement services; training in mobility, reading, and writing; and training in Braille and computer use.

Using the same database, Kirchner (1991) studied self-perceptions concerning employment discrimination and self-limitations of adults in Illinois who are blind or severely visually impaired. Findings suggest that respondents with higher self-confidence are more likely to blame the employer for problems in their job searches and that they are more likely to perceive discrimination by employers as a general problem for people with blindness or visual impairments. Respondents who rated their own job search skills as low were also more likely to see employer attitudes as a barrier to successful employment.

In the third phase of the Illinois study, employers were interviewed to determine the issues contributing to successful employment among persons who are blind or visually impaired (Harkins et al., 1991). Employers were more likely to have policies to retain workers who become disabled than to hire persons with existing disabilities. Employers indicated they had typically not been contacted by rehabilitation service providers. Employers further reported that personnel departments screen applicants, whereas department supervisors make hiring decisions. Employers expressed a need to know (a) how people who are blind or visually impaired perform job tasks, access and retain records and printed information, and access computer information; (b) how dog guides are used; (c) how insurance issues are affected; and (d) how termination procedures are handled. Employers indicated a need for assistance in providing mobility training within the work environment and obtaining consultation when job requirements change. Provision of on-the-job training programs and tax credits for hiring persons with disabilities were regarded as effective in promoting employment options. Public sector employers were more likely than private sector employers to hire persons with disabilities.

Schriner (1997) reviewed several models for employing people with disabilities and identified key integrative factors that improve employment outcomes. The most promising strategies involve consumers in the total rehabilitation process, provide personalized support over an extended period of time, and have a sense of urgency regarding placement of individuals in the community, as opposed to segregated employment. Strategies also focus on the development of natural supports and partnerships with employers. The models incorporate clear and easily defined goals and objectives that are highly adaptable to a particular individual and require a cooperative effort between vocational rehabilitation researchers, service providers, and consumers.

There are strategies that schools, families, individuals, employment specialists, and employers can utilize to improve employment and job retention for individuals with disabilities

(Roessler, Brolin, & Johnson, 1990). Schools can incorporate vocational goals and training into Individual Education Plans, increase vocational placement services, incorporate more formal structures for preparing students for higher paying jobs, and offer vocational development classes to assist students in choosing and preparing for future employment goals. Families and individuals can become involved in vocational planning activities, acquire part-time work to develop job readiness skills, and contact post-high school service agencies, such as vocational rehabilitation early in the student's education. Employers can provide input to schools about basic vocational and educational skills necessary for students to compete with other workers, and can form partnerships or cooperatives with schools to prepare future workers.

Sisson and Babeo (1992) recommend that parents and guidance counselors start as early as middle school to improve the gainful employment status of children who are blind or visually impaired. The authors note that schools and adult service providers should work together to insure that these students have necessary social and vocational skills to successfully compete in the job market. Schools should take the lead and coordinate the transition-to-work process. Schools should also place some emphasis on acquiring vocational skills before students finish high school. Adult agencies play a critical role in the successful placement of students who are blind or visually impaired by helping clearly define vocational goals and by providing a means to reach those goals.

The use and implementation of natural supports in the workplace by the rehabilitation service provider, employee, and the employer to enhance employability and job retention factors of the disabled worker are discussed by Storey and Certo (1996). Natural supports (people who function in a specific relationship with a person with a disability) provide greater social integration than traditional supports. In the workplace, natural supports may include continued skill and social skill instruction, advocacy, and job modification strategies. Connections between the community and the workplace can be enhanced by the use of natural supports, such as counseling, friendships, and political power. When used in conjunction with traditional rehabilitation services, natural supports can enhance the employment outcomes for people who are blind or visually impaired and help the employer integrate the employee into the work environment.

Rabby and Croft (1989) recommended that job seekers who are blind take an integrated approach to the job market. This includes starting with the basic question of what kind of work to do. They suggest thoroughly exploring all areas of interest by reading, asking questions, observing, and working in the field. A key part of job preparation is self-assessment and the authors offer several resources for this. Rabby and Croft further offer tips for letter writing, the application process, interviewing, and career maintenance. Knowing and updating skill levels and maintaining acceptable productivity levels are keys to maintaining and advancing in the workplace.

Sociodemographic Issues

Pfeiffer (1991) conducted a study of people with disabilities in Massachusetts and uncovered several variables that relate to the employment and income levels of people with disabilities. Level of education was the largest influencing factor, and that, in turn, was affected

by race and gender. Specifically, it was found that educated White males who were disabled had higher incomes than any other group. Pfeiffer concluded that the social structure in America grants greater access to this population than to other members of the disabled community. Rehabilitation counselors need to provide clients with the skills necessary to compete equally in society.

In a survey of 109 adult rehabilitation clients who are visually impaired, Gandy (1988) examined the impact of education on post-placement earnings in competitive employment. The author found that age, race, and education level affect salaries, with younger Whites earning more than older non-Whites. Salary level increased proportionately with education level. The author recommends encouraging rehabilitation clients who are blind or visually impaired to consider more education or training when preparing for careers, or salary levels may not be adequate for their needs.

In a study of the lifestyles of persons who are legally blind (Kirchner, McBroom, Nelson, & Graves, 1992), it was determined that, compared to men who are legally blind or to sighted persons of either sex, women who are legally blind received less positive results from education in terms of income or life satisfaction. They also terminated their education at an earlier stage, and were the least likely group to pursue a college degree in a prestigious male-dominated field. Women who are legally blind are more likely to be employed in lower paying clerical fields.

Attitudinal barriers and sex-role stereotyping affect the employment opportunities and prospects of women who are blind or visually impaired. Dixon (1983) noted that women who are visually impaired are more underrepresented in the labor force than men with visual impairments and attributed this discrepancy to discrimination, discouragement, and disincentives to work. The extent of their visual impairment and the attitudes that employers hold about blindness and women restrict access to competitive employment for women who are visually impaired. Dixon reported that employers are unaware of the capabilities of people who are visually impaired and of the accommodations that can be made in the workplace. Strategies to help overcome these attitudinal barriers include adequate preparation for a career, assertiveness training to overcome self-doubt, and the use of workplace support systems.

Hill (1989) built on previous research to examine determinants of successful employment outcomes for vocational rehabilitation clients who are visually impaired and added personal characteristics data to the research. In a sample of 18,394 rehabilitated clients in 1982, it was found that men were more likely than women to be placed in competitive employment. Three times as many women (particularly older women) as men were closed into "homemaker" status.

Wacker (1976) surveyed 96 vocational rehabilitation counselors to examine how vocational suggestions and salary predictions are influenced by clients' gender. Half of the respondents were presented with data about a male client and the other half received identical data concerning a female client. The author found that salary predictions for women were, on average, lower than predictions for males and that counselors tended to suggest sex-stereotypical careers for both male and female hypothetical clients. The author suggests that this attitude pervades the vocational services process and leads counselors to recommend lower paying and lower skilled jobs for women who are visually impaired.

People who are blind or visually impaired living in rural areas face unique problems in the area of rehabilitation and employment (Offner, Seekins, & Clark, 1992). They are generally

less educated and less healthy than their counterparts in urban areas, are more often poor and underemployed, and lack access to appropriate health and rehabilitation resources. Specific problems noted by the authors include too few rehabilitation personnel to deliver services to individuals in rural areas, inadequate training and transportation resources, and too few employment opportunities. Solving these problems are crucial to ensuring adequate rehabilitation service delivery in rural areas.

In a review of the literature of individual characteristics affecting employment outcomes, Sanderson (1997) identified several characteristics of individuals with disabilities that hampered opportunities for competitive employment. Adults with work disabilities living in rural areas are more likely to be unemployed than their urban counterparts. African Americans and Hispanic Americans have disability rates almost 3 times higher than Caucasians and are at greater risk of disability throughout their lifespan. It is estimated that 1 in 4 Native Americans, including Eskimo and Aleut persons, has a disability. All of these minority groups have lower employment rates among the disabled population than Caucasians with disabilities, with African Americans reporting the lowest rates. This research indicates that one of the most common barriers to employment of people with disabilities is ethnic minority group membership.

In a related work, 148,188 vocational rehabilitation clients whose cases were closed as rehabilitated were examined for employment outcomes (Majumder, Walls, Fullmer, & Misra, 1997). Individuals with the highest probability of competitive employment had either been employed at the time of application to vocational rehabilitation or had non-severe disabilities. Individuals with work histories were also likely to be competitively employed. Low probabilities for competitive employment across disability groups were closely associated with receipt of public program benefits, indicating a need for adequate employment that does not result in loss of benefits. It should be noted, however, that individuals who receive public benefits are typically more severely disabled.

Limitations in vocational interest are formed early in childhood for individuals who are blind or visually impaired which result in substantial barriers to employment. Parents and teachers tend to restrict the activity of these children, preventing them from learning what they are capable of accomplishing (Vander Kolk, 1981). Parents often excuse their children who are blind or visually impaired from normal household chores, leading the children to assume that others will do the work for them. Schools rarely include curricula designed to encourage students who are blind or visually impaired to prepare for work and often do not promote expectations that people with disabilities can work. Teenagers who are blind or visually impaired rarely obtain part-time work, thus depriving them of learning basic employment skills, such as punctuality and getting along with coworkers. Lack of experience and low expectations of significant others often lead individuals to substantially limit their employability and exhibit low levels of vocational maturity as compared to others in their age group.

Policy Issues

Results from an employment summit sponsored by the American Foundation for the Blind were reported by Maxson et al. (1997). The authors noted several factors related to the high level of unemployment of people who are blind or visually impaired, and offered potential

solutions for overcoming barriers. Possible solutions for barriers that are individual in nature (such as poor self-concept), require intervention at a personal level to either overcome the barrier or change the individual's response to the barrier. Solutions to other, more global, barriers require interventions at a higher level, such as affecting change in the national economy and in transportation systems. Possible solutions to global barriers include (a) forming links between corporations or businesses, consumers, and rehabilitation service providers; (b) changing policy based on relevant demographic data; (c) altering public attitudes; (d) revising benefits policies affecting work disincentives; (e) improving information access through improved technology; (f) updating the attitudes and skill levels of rehabilitation service providers; (g) revamping the rehabilitation system; (h) providing consumers with leadership opportunities; (i) updating career education opportunities and career information; and (j) matching job seekers' skills with employers' needs.

In a 1997 report on removing barriers to work, the National Council on Disability (NCD) reviewed three major barriers to employment for people with disabilities and recommended policy reform to remove these barriers. The first barrier noted was that many people are worse off financially if they work to their full potential than they would be if they did not work. Under proposals to make work pay, NCD recommended (a) providing medical coverage for workers with disabilities; (b) replacing the 'income cliff' with gradual reductions in benefits; (c) ensuring benefit eligibility to persons who are working, but who have not recovered from their disability; (d) compensating for disability-related work expenses through a tax credit; (e) removing marriage penalties; (f) waiving overpayments when the beneficiary is not at fault; and (g) raising resource limits for SSI eligibility from $2,000 to $5,000.

Another major barrier studied by NCD (1997) is the lack of choice for individuals obtaining rehabilitation services. The Council contends that individuals could earn more and become financially independent if the aforementioned policy changes were made and if workers had access to information regarding the types of rehabilitation best suited for themselves. Proposals to increase access and choices include instituting a "ticket" or "voucher" program to allow SSI and SSDI recipients to select and buy rehabilitation services; providing access to investment funding, such as the PASS (Plan for Achieving Self-Support); and eliminating scholarship and fellowship penalties.

The final barrier NCD (1997) noted to employment for people with disabilities is the lack of employment opportunities. By increasing employer incentives, such as reimbursements for disability expenses and tax credits for disability and diversity training, this barrier could be eliminated. Employer concerns about increased health care costs could be alleviated by a Medicaid buy-in with wraparound coverage.

In 1996, the National Academy of Social Insurance (NASI) convened a Disability Policy Panel to discuss policy issues affecting workers with disabilities and to propose solutions to common problems in current disability policy. The Panel noted that access to health care is a major barrier to people with disabilities. Short of comprehensive health care reform, Panel recommendations include improved Medicare buy-ins for people who formerly received SSDI, but return to work, and tax credits for personal assistance services. The Panel also encouraged states to create buy-ins to their own Medicaid programs. This would aid working people with disabilities to fund adequate health care services.

The NASI Panel (1996) offered recommendations to enhance the rehabilitation of workers who are disabled and the rehabilitation services they receive. For workers with acquired disabilities, the Panel proposed short-term disability income protection insurance to close the gap in income protection and to encourage early rehabilitation intervention, since earlier intervention leads to more positive gains in the rehabilitation process. Due to the high cost of implementing such a program, however, the Panel concluded this option was not feasible. A return-to-work ticket proposal would allow individuals to receive a voucher to choose rehabilitation service providers in the public or private sector. Providers would be reimbursed for services only after the client returns to work. This system would empower clients, encourage competition, and reward service providers for the results of their labors. Another Panel recommendation involves a wage subsidy for low-income workers with disabilities in the form of a tax credit. This could encourage older workers to delay the start of cash benefits, ease the school-to-work transition for individuals with developmental disabilities, and ease the transition back to work for recipients of SSDI or SSI.

Since access to health care is a major impediment to leaving disability benefits programs, the NASI Panel (1996) also recommended methods to ease this barrier for SSDI beneficiaries returning to work. Proposals included the following (a) Medicare buy-ins with sliding scale premiums based on previous earnings; (b) affordable buy-ins to state Medicaid programs, including both acute care services and ongoing support; (c) tax credits for personal assistance expenditures for necessary daily services; (d) improved administration of SSI and SSDI work incentives; (e) addition of more work incentives to the existing set, including updating the current level of income that is considered substantial gainful activity (SGA), which provides an unlimited extended period of eligibility to SSDI recipients if their return to work fails; and (f) revision of allowable deductions of disability-related work expenses.

Vandergoot and Gottlieb (1994) overviewed an emerging model to address work-related disabilities that uses a broad base of resources and distributes responsibility for rehabilitation more equitably across society. The authors stress that disability management is an integral part of good business management and can be accomplished by following four ongoing steps: (a) identifying disability-related problems and needs by analysis of existing data, including cost, policy, and management perceptions; (b) disseminating information and customizing training to build knowledge of disability issues for all workers; (c) designing services and activities tailored to specific objectives, solutions, and resources; and (d) monitoring and evaluating the key effectiveness indicators of a company's disability policies.

Based on this emerging model, Vandergoot and Gottlieb (1994) recommend policy and practice changes to better manage disability and to return more people with disabilities to the workforce. To reduce Worker's Compensation claims and to increase safety on the job, insurance rates can be deregulated, deductibles can be introduced, the waiting period for payments can be extended, and employers with poor safety records can be charged higher premiums. The current Worker's Compensation system could enlist a disability prevention program that joins safety managers and other management personnel with human resource executives. Government and corporate-sponsored research to determine the cost and benefits of mandatory vs. voluntary rehabilitation could be conducted and other illnesses not linked to the primary disability could be acknowledged.

Policy changes identified by Vandergoot and Gottlieb (1994) for the vocational rehabilitation system included: (a) shortening the amount of time from illness/injury to referral for services; (b) returning the individual to work with the same employers after injury; (c) including as much employability information as possible in the service eligibility determination; and (d) providing services in work environments. Private corporations should assess internal disability policy to ensure that only the most effective practices are utilized. They should also make sure employees are well informed about disability benefit policies, and efforts to control disabilities should be coordinated across departments. Disability costs and incidents should be tracked and hidden costs managed.

Roessler (1987) examined public policy and service provision factors affecting employment for persons with disabilities. Recommendations are provided for employers, as well as rehabilitation consumers and providers. Four policy changes were suggested for promoting increased employment opportunities: (a) developing educational and vocational programs that focus on general service job preparation and increasing training in computer skills; (b) involving employers in vocational training programs; (c) continuing medical coverage for persons relying on government programs for medical insurance; and (d) utilizing tax incentives to make hiring persons with disabilities more financially attractive and to facilitate job accommodations. Other policy initiatives included (a) adherence to worker safety and affirmative action programs, (b) education of rehabilitation service providers regarding economic and vocational trends, (c) evaluation of the quality and quantity of rehabilitation placements, (d) enhancement of job seeking skills for persons with disabilities, (e) promotion of supported employment experiences, and (f) implementation of employee assistance and benefits programs to increase employee retention.

Disability policy analysts point out that disability policy has categorized persons with disabilities and provided specialized services based on the disability (Schriner, Rumrill, & Parlin, 1995). Both policies result in persons with disabilities being treated as a distinct population (i. e., separate from persons without disabilities). The authors argue that the Americans with Disabilities Act (ADA) renders such a distinction inappropriate. Instead, they advocate for service delivery through a mainstream approach in education and training settings, health care reform, and enforcement of civil rights.

In an effort to collect information about job placement personnel, activities, and resources, the American Foundation for the Blind (AFB) surveyed state and private agencies providing services to persons with visual disabilities (Miller & Rossi, 1988). Results of the survey were compared to placement rates compiled by the Rehabilitation Services Administration (RSA). Comparisons indicated that agencies utilizing rehabilitation counselors and placement specialists experienced higher placement rates than agencies using rehabilitation counselors only. Survey respondents recommended the following policy changes to improve placement efforts: (a) increase funding; (b) recruit personnel trained in placement techniques; (c) improve staff training; (d) increase availability of sources for technological information; (e) develop employer education programs; (f) increase information about labor market trends; (g) develop joint employer-agency training programs to meet employer needs; and (h) improve agency leadership and commitment to placement goals.

AFB conducted an "Employment Summit" with representatives from a variety of sectors (i.e., human resource managers, consumers, and government policy experts) to examine employment preparation and job development systems utilized by persons who are blind or visually impaired. Ten critical issues were identified and used as the basis for developing a national agenda toward achieving full employment for persons who are blind or visually impaired (Johnson, 1995). Issues identified by the work group included (a) maximization of partnerships among corporate sectors, rehabilitation consumers, and providers to increase employer understanding of the capabilities of persons with visual impairments and blindness; (b) collection of current and reliable demographic information regarding persons who are blind or visually impaired that can be utilized to develop public policy; (c) promotion of a positive change in public attitudes, understanding, and awareness of persons who are blind or visually impaired, particularly regarding their work skills and abilities; (d) modification of existing public policies to remove disincentives to work; and (e) expansion of efforts to insure access to information available through technology. The work group identified five additional issues related to the rehabilitation and consumer system: (a) development of reality-based training programs that result in qualified and competent rehabilitation service providers with positive attitudes toward their jobs and consumers; (b) implementation of policies emphasizing employment outcomes, independence, and community integration; (c) empowerment of consumers; (d) dissemination of career and occupational information to consumers, parents, rehabilitation service providers, and educators; and (e) development of opportunities for persons who are blind or visually impaired and their employers to participate in ongoing training and development activities.

Three distinct work groups convened again during the AFB's Josephine L. Taylor Leadership Institute in 1996 and addressed the impact of public awareness, rehabilitation and education personnel preparation, and partnerships with employers of persons who are blind or visually impaired on consumer underrepresentation in the labor market. Each work group identified problem areas and potential solutions, including the entity most appropriate to facilitate the solution, and a tentative time line. The work group noted insufficient public education on employment capabilities of people who are blind or visually impaired and insufficient documentation on what placement practices result in quality job placements. Also reported as barriers to employment by the group were federally funded work disincentives, such as SSI; attitudes of learned helplessness fostered by professionals and significant others; and the philosophical gaps between personnel in education (where the push is to graduate students) and rehabilitation (where the student is considered a "miniature adult") (Johnson & Walker, 1996).

Work group members in the public awareness area suggested the development of workshops to teach consumers to effectively educate service providers, employers, the general public, and themselves about the skills and abilities of persons with visual impairments (Johnson & Walker, 1996). Development of a consumer team to train educators, students, employers, service providers, and parents of children with visual impairments was also recommended. In addition to these consumer efforts, service providers should utilize a multimedia approach to educate the general public, especially employers, about these issues. Finally, development of a job information database linked to the Internet was recommended.

In the area of partnerships with employers, networking with employers and educating employers and the public (both on an individual level and through massive public awareness

campaigns) were mentioned again as strategies to reduce barriers to employment (Johnson & Walker, 1996). Increased career information and access to job skills training for children and youth with visual disabilities and their parents were emphasized, along with development of leadership skills.

Work disincentives continue to prevent many people with disabilities from becoming successfully employed (Berkowitz, 1980). It is not, however, these programs alone that keep disabled people out of the workforce. Labor market opportunities, or lack thereof, combined with financial disincentive programs contribute toward keeping these individuals at home. Functional limitations, combined with a lack of capital, education, training, and job experience, lead the consumer to consider nonemployment income as a viable alternative to work. In order to have an effective SSI and SSDI policy, these additional factors must be addressed.

The most pervasive policy issues that present barriers to employment for people who are blind or visually impaired are financial disincentives. This population is often better off, financially, if they do not work. Lack of choice concerning rehabilitation services is also a barrier noted by several researchers, along with educational improvements in the areas of college preparation and computer technology. Alternatives to many of these barriers have been discussed and could result in increased employment opportunities for individuals who are blind or visually impaired.

Technology Issues

In a discussion of the impact of technology on skill formation and career development of persons with visual impairments and blindness, Mather (1994) related that some workers found their career paths shaped by the technology provided by their employers. He advocated that rather than relying on adaptive technology, methods be devised so that persons with visual impairments can access standard equipment with as little modification as possible. The development of socialization and communication skills of workers with visual impairments was emphasized. Mather stated that socialization and training opportunities are vital to maintaining technological equity.

In a discussion of the use of graphical user interface (GUI) systems by persons who are blind or visually impaired and how this use impacts employment, Melrose (1995) questioned whether access technology can remain current with general technological advances. Melrose advocated that persons who are blind or visually impaired demand equal access by program developers and require government entities to adhere to regulations requiring that all software be accessible. According to Cavenaugh, Giesen, Laney, Maxson, and Johnson (1997) some developers have expressed concerns with providing accessibility to users with disabilities, but they admit that providing access to people who are blind is their most significant weakness. Therefore, it is essential that rehabilitation service providers and educators keep up-to-date about technological advances and provide appropriate education to persons needing access equipment.

Wakefield (1995) maintained that the move by many employers to a graphics-based Windows environment will lead to the reduction of computer-oriented skills (and subsequently jobs) that persons with visual impairments are able to perform. Applications of access packages are version specific. Screen readers may have difficulty corresponding with the text on the

screen, and screen readers do not access error messages from the screen. Gill (1995) echoed these concerns, but maintained that the issue of providing additional training by persons with visual impairments utilizing a GUI environment is also a significant barrier to computer use. Additionally, the greater time required for a person with a visual impairment to access the GUI environment compared to a sighted peer has not been addressed.

There is less research on technological issues concerning barriers to employment for individuals who are blind or visually impaired than on other issues. Training for consumers on adaptive technology is a problem, as is inadequate access to Windows environments for people with visual impairments. Technology improves so quickly that there is concern that GUI systems cannot keep up-to-date with the changes. Employing a rehabilitation technologist, a specialist in the technology field, could alleviate some of these barriers, as would software companies' awareness of the needs of consumers.

Conclusions

Clearly there are many barriers to employment of people who are blind or visually impaired. There is a general consensus that overcoming these barriers would lead to equal employment opportunities. Research indicated that common barriers include the following: (a) transportation, (b) skills and education, (c) employer attitudes, and (d) government-sponsored work disincentives. Access to adequate health care coverage, and improved rehabilitation service choices and delivery need to be addressed. There are, however, many more barriers that prevent this population from working to their full potential. Further research should address these barriers and develop methods to overcome them to insure equal access to job opportunities for individuals who are blind or severely visually impaired.

Methodology

A mail survey was undertaken to answer the following general questions: (a) What were the major barriers you overcame to become employed? (b) How were these barriers overcome? (c) Who was instrumental in helping you overcome these barriers? and (d) Why were you successful in overcoming these barriers when many individuals are not successful?

Questionnaires were developed from the literature review, previous RRTC questionnaires to allow for comparison between studies when appropriate (specifically, Crudden, Moore, and Giesen's (1996) survey of direct labor workers who are blind and employed by National Industries for the Blind Affiliated Industries for the Blind), and consultation with the Constituent Oriented Research and Dissemination (CORD) advisor and the RRTC National Advisory Council. It contained items describing respondents' current employment, problems locating and retaining employment, job search methods, barriers to employment, vocational rehabilitation services, helpfulness of various services and supports, and demographic items. The survey contained both closed-ended responses and open-ended questions. The survey was field tested and revised.

Names were drawn from the American Foundation for the Blind's (AFB) Careers and Technology Information Bank (CTIB) and the RRTC's National Consumer Feedback Network (NCFN), two national databases of people with visual impairments who agreed to participate in research projects and to answer inquiries from consumers and professionals. From each database, 200 names were randomly selected from a subsample of people currently employed and living in the 48 contiguous United States. An employee of AFB obtained permission to interview the CTIB members through an initial telephone contact (to ensure confidentiality of responses) and to determine the preferred media format (large print, Braille, tape cassette, e-mail, or computer diskette). Survey instruments in the appropriate media were mailed from AFB to CTIB members. Because the NCFN is maintained by the RRTC, packets were sent to potential respondents without an initial telephone contact. Survey instruments in the appropriate media were mailed according to information contained in the database (large print, Braille, or cassette tape). Self-addressed, stamped envelopes were also included for the respondents' convenience. Follow-up reminder postcards were sent to both CTIB and NCFN members after a 2-week period.

After removing packets which could not be delivered (moved or deceased) and removing individuals who did not qualify for the study (not visually impaired, not employed), a response rate of 44% (n = 166) was obtained. In spite of the initial telephone contact with CTIB members, there was no difference in the response rates from CTIB and NCFN.

The data were cleaned, coded, and entered into a database for analysis. The data were analyzed using descriptive data techniques (e.g., frequency analysis) and appropriate quantitative analysis (e.g., Chi-square, factor analysis, ANOVA). Responses from the open-ended questions were categorized into themes and percentage responses were calculated for each theme. Representative quotations appear in this document to illustrate the types of responses received.

Results

Demographic Characteristics of Respondents

The majority of respondents are White (90%) with a few Blacks (6%) and Hispanics (4%) also participating. Responses are almost equally divided between females (51%) and males (49%).

The education level ranges from the 5th grade to doctoral level with a bachelor's degree as the average. During elementary and high school, the majority of respondents attended regular public or private schools (61%). Ten percent studied in a school for the blind and 25% attended both regular schools and schools for the blind. Most respondents (78%) had a visual disability during high school. In fact, the average age of onset was 9 with 52% visually impaired at birth.

When forced to choose one reading medium, the majority of respondents prefer Braille (31%) and large print (27%), followed by tape or talking books (19%), computer diskettes (10%), regular print (5%), and CCTVs (5%). Among Braille readers, almost everyone reads Grade Two Braille (93%).

The majority of respondents live in large cities with more than 100,000 people (33%) or suburbs of large cities (22%). Twelve percent live in medium cities (50,000 to 100,000 people), 17% in small cities (10,000 to 50,000), 9% in towns (less than 10,000), and 7% in rural areas or farms.

Reflecting the general transportation options of large cities, respondents travel to work by public buses (25%), are driven by family or friends (22%), are passengers in car pools (13%), use paratransit (7%), or walk to work or use a scooter or wheelchair (7%). Six percent travel by train or subway, 5% travel by taxi, 3% employ a driver for their own car, and 2% drive themselves. A small group of respondents (7%) work from their own home.

While all the respondents are legally blind, their functional vision varies a great deal. Forty-three percent have "no useable vision," 24% have "very little useable vision," and 33% have "quite a bit of useable vision." Excluding those who were visually disabled at birth, 67% experienced a gradual vision loss, while 33% had a sudden vision loss. The degree of vision loss is stable for most respondents (76%), while 23% are experiencing a decrease in vision.

The majority of respondents have no other health problems (83%). Of those respondents who reported additional health problems, most (26%) have musculoskeletal disorders (such as arthritis and scoliosis); 21% have cardiovascular diseases (including high blood pressure, angina, and stroke); 16% are diabetic or have digestive system disorders; 11% have neurological problems (such as post-polio syndrome, multiple sclerosis, or cerebral palsy); 8% are hearing impaired; 8% have allergies; and 11% have other health problems (such as cancer, asthma, albinism).

Reflecting the fact that the average age at onset of visual impairment was 9 years, the majority of respondents were not employed when their visual disability began to affect their daily activities (74%). They have been employed on their current job an average of 11 years (from 1 month to almost 43 years) and 23 years for their entire work history (from 3 years to 62 years). Most of their employment history has occurred while visually impaired (average of 19 years with a visual disability). Respondents' average age is 47 (from 25 to 83 years).

Current Employment

All respondents are currently employed and work an average of 40 hours per week (actual responses range from only 1 hour per week to 81 hours per week). The majority of respondents work more than 20 hours per week (94%). Most respondents work for a private company or business (31%) or state government (26%). Other respondents are self-employed in their own business, professional practice, or farm (14%); work in an industry for the blind (14%); or work for local (7%) or federal governments (6%). A few respondents hold two jobs (3%).

Most respondents are either "very satisfied" with their current job (41%) or "satisfied" (35%). The others are "very dissatisfied" (5%), "dissatisfied" (9%), or "neutral" (10%).

The average annual income level is between $30,000 and $34,999. This amount includes wages; salaries; retirement income; interest income; dividends; net income from a business, farm, or rent; and other forms of income. Not included in this figure is social security, unemployment, public assistance, or SSI. Approximately one third of the respondents earn less than $25,000 a year, one third earn between $25,000 and $39,999, and one third earn $40,000 or more a year. Although most respondents do not limit their income (88%), 12% do in order to keep other benefits such as medical insurance or Supplemental Security Income.

Total Income	Frequency	Percent
Less than $9,999	17	11.3
$10,000 to $14,999	13	8.6
$15,000 to $19,999	9	6.0
$20,000 to $24,999	11	7.3
$25,000 to $29,999	19	12.6
$30,000 to $34,999	12	7.9
$35,000 to $39,999	13	8.6
$40,000 to $44,999	14	9.3
$45,000 to $49,999	11	7.3
$50,000 and more	32	21.2
Missing	15	Missing

Employment Problems Due to Visual Disability

Respondents were asked a series of questions to determine what barriers presented the most substantial problems in getting a job. Responses to this question were grouped into eight categories: employer's attitude, transportation and mobility, print access, adaptive equipment and accommodations, job opportunities, personal fears and uncertainties, and ability to recognize faces. Of the respondents who answered this question, the majority (41% of responses) indicated the employer's attitude was the biggest barrier to employment they faced. Examples of their responses include the following:

> *My visual disability made potential employers focus more on my incapabilities rather than what I could be capable of doing.*

People would tell me what I could and could not do. I had to constantly struggle to overcome their perceptions and show them what I could do.

I used to find that because I wore extremely high-powered glasses, people made assumptions about me without asking questions.

A large number of respondents (17% of responses) noted transportation and mobility difficulties as their biggest problem in obtaining employment.

I had to turn down offers or reject possibilities because commuting would be too hazardous or because of the hours being too late (darkness).

Throughout my career, the biggest problem caused by my low vision has been my inability to drive.

[My biggest problem has been my] inability to perform most engineering positions due to inability to drive myself to any place at any time.

Another group (14% of responses) noted that reading print is the biggest difficulty they face when locating a job. Two respondents answered, "*My vision did not affect my ability to get a job, but it does affect my work significantly, mostly in the areas of printed matter and computer access.*" and "*[My biggest problem was my] inability to read printed material without extra help.*"

Obtaining adaptive equipment and accommodations were also listed as problem areas in 9% of the responses.

[My biggest problem was] getting through the front door due to extensive adaptive modifications needed for a totally blind person to do the job.

However, I also feel that the lack of adaptive technology in the "old" days made it much harder to convince employers of the feasibility of my working. In fact, it was much more difficult, slow, and cumbersome to function back before computers, print scanners, on-line databases, etc. With the new technology, I am many, many times more productive than before. My quality is better on the average because it is so much easier to review materials on my own rather than rely on a reader. That puts the blindness aspect of my work to a much smaller factor than before, and one that people can more readily understand, and put into perspective.

The biggest problem is accessibility to changing technology. For this reason, I went into business for myself.

A similar number of respondents (7% of responses) stated the lack of opportunities due to their visual impairment was a substantial barrier to getting a job. Two respondents wrote, "*[My biggest problem was] getting my foot in the door. After being hired, most staff had no trouble in accepting me as a contributing peer.*" and "*I am totally blind and therefore am fairly limited in*

the type of work I can do. I would say the biggest problem my visual disability has caused in my getting a job has been that it has narrowed my job choices over those a sighted person has."

Personal fears and uncertainties were a problem in getting a job in 3% of the responses. For example, two respondents stated their biggest problems were "*lack of confidence due to past rejections which are numerous*" and "*[my] anxiety to meet expectations.*"

Another 2% experienced employment difficulties because they could not recognize faces. One respondent expressed it this way, "[*My biggest problem was*] *not being able to see/recognize people and networking activities. If I don't see someone I know and they are not aware of my visual impairment/legal blindness and I do not speak to them, I can be seen as a snob, or rude.*"

Other barriers that 7% of the respondents faced due to their vision difficulties included problems with communication, seeing, ability to perform research, controlling classrooms, and "not looking blind."

Changes in Job Due to Visual Disability

Job changes. Although most respondents have never changed the type or kind of paid work they perform (72%), 28% did change their type of work to accommodate their visual disability. Fewer respondents changed the number of hours they worked per week because of their visual disability (21%). In fact, most respondents found it quite difficult due to their visual disability to change jobs (82%).

When asked what made it difficult to change jobs, they replied: employer's attitude, transportation, the use of adaptive equipment, limited opportunities, and print access. Over a quarter of the responses (27%) noted that the employer's attitude constituted the most difficulty in changing jobs.

> *I have not even considered changing jobs. But it would take some hard selling for people in this area to hire me. They are scared of visually impaired people. Aren't there sheltered workshops for us to work at?*
>
> *Employers don't want to hire blind people.*
>
> *It is difficult to get interviews even for jobs I am qualified for. I have been applying for jobs 2-3 years, but I feel that I am not interviewed because I am employed by [the state rehabilitation agency] and when a job application asks for a driver's licence number, I fill in my ID number.*

Two categories were listed by the same number of responses as making it difficult to change jobs (transportation and the use of adaptive equipment). One-fifth of the responses (20%) stated that transportation caused them substantial difficulty when changing jobs. In another 19% of the responses, access to adaptive equipment, the need for training on that equipment, and the expense of adaptive equipment were the barriers respondents were most likely to face when changing jobs.

Transportation:

Lack of transportation [makes it difficult to change jobs]. Job shops will offer me work out of town or out of state knowing full well I can't drive a car.

Transportation to and from work has always been a concern for me. I depend on other employees for rides.

Adaptive equipment:

[The] costs of reasonable accommodations puts an invisible price tag around your neck.

It is difficult to search for new employment without the services of a sponsoring agency, such as a commission for the blind, as the adaptive equipment/techniques that I currently use will not suffice for any other job. Requirements vary so much from company to company or agency to agency, even within the same job title, that it is difficult to know how to adapt all of them without the assistance of a high tech consultant. Potential employers are not easily convinced they should pay for these services.

There is less flexibility because of computer equipment, [and] having enough office space for equipment and [the] guide dog.

More than 16% of the responses listed limited opportunities due to their visual impairment as a barrier to changing jobs. Three respondents wrote, "*Traditional jobs are not available and jobs utilizing my degree require more computer knowledge than I have at present.*" "*Few jobs are available, even though I have a teaching certificate.*" "*If I were sighted, I would have more vocational choices.*"

Reading print was cited as a barrier in 7% of the responses. One person responded, "*[I experience] poor and deteriorating access to printed materials. The unavoidable overhead of energy, thought, and just plain time/work needed to gain access to so much of the world which is geared more and more toward vision [is a barrier to my changing jobs].*"

Eleven percent of the responses listed other barriers they encounter when changing jobs including relocation to new offices, forms and procedures, and reduced benefits and income. One respondent wrote, "*[Changing jobs is difficult] to the extent that my blindness makes most activities more difficult.*"

Job advancement. Responses were more split when asked "Does your visual disability make it difficult for you to advance in your present job?" Fifty-eight percent had no problems, while 42% found it difficult to advance.

Among respondents who found it difficult to advance in their jobs due to their visual disability, their reasons included lack of opportunity, problems with print access, lack of skills and adaptations, employer attitudes, lack of transportation, and work speed. The greatest percentage of the affirmative responses (26%) indicated that this was due to lack of opportunity.

Yes, where am I going to advance to?

My career ladder is not as well defined as others and this limits my promotion potential because no clear precedent exists.

[My visual disability] probably has limited the breadth of experience I need to get promoted.

Respondents are also limited in job advancements by access to print (17% of responses), lack of skills or adaptations (14% of responses), employers' attitudes (14% of responses), and lack of transportation (13% of responses).

Access to print:

For example, to move up to supervisor, etc., there is typing experience, paperwork, computer skill, and supply and demand records to keep. [This is] too much work on [my] eyes.

Next step in customer service is management. I do not want, nor would I do well, to be in management. To prepare an IDP, one has to work with a written evaluation, job elements, a job elements sheet, and the IDP format/questions.

Lack of skills or adaptations:

Since my office is moving exclusively to a Windows environment, I've found it difficult to keep up in that arena.

Everything must still be adapted somewhat, even with all my new computer equipment; so advancement appears to be more trouble than it is worth.

Employer attitudes:

The second problem, if you can call it that, is that I am truly good at what I do. Many administrators, especially those who make personnel decisions, seem to believe that, since I am a blind person, I should remain in services for the blind and visually impaired.

While it is difficult to objectively analyze the various factors involved, it is likely a question of superiors not wanting to risk their positions by appointing someone to a position to which the general public believes it would be impossible for a blind person to perform.

Transportation:

[I] would not be able to get a job as a rate supervisor because I wouldn't be able to drive around to accounts.

[I] cannot travel to other offices or to [the] field without major hassles; this does not go unnoticed by administrators thinking about promotions.

The importance of work speed was cited in 8% of the responses. One respondent stated, "*[I am] not as productive as I was with normal vision (simply can't process information and make important decisions based on it as quickly as others whom you have to compete against to advance).*"

The remaining responses (8%) included such sentiments as, "*I think that I am afraid to try because of my blindness.*" and "*The lack of social contact (i.e., agency softball) etc., has put me apart from other management staff.*"

Underemployment. Thirty-five percent of the respondents felt they were underemployed. Sixteen percent of the responses simply elaborated that they were indeed underemployed, but offered no further explanation. For example, their responses included, "*Yes, five hours of work, when you get it, is definitely underemployment.*" or "*I have not reached my fullest potential yet where I am.*" or "*I do not get paid comparable to private industry.*"

In another 16% of the responses, respondents believed they had not advanced in their careers over time. Two respondents stated, "*After 20 years of employment, I feel I should get promoted.*" and "*After 15 ? years, I hold a position three rungs from the bottom of the ladder.*"

However, the majority of responses (22%) indicated they were overeducated for their present position:

I have never utilized my college degree at all.

My current job does not require me to use any of my prior education.

The level of education which I possess is not entirely necessary to perform my job duties.

In 14% of the responses, skills and adaptive equipment were needed to end underemployment:

I should be at least a senior analyst by now. However, I have trouble using the design and management tools that other departments can use. Also, I cannot analyze and solve a problem fast enough to demonstrate that I have the right skills.

Yes, underemployment is the current status due to difficulty in dealing with the graphical interface and because while in school, proper counseling and advice was not provided that would relate to the reality of the job market after undergraduate or graduate school.

I am not terribly underemployed, but I feel I would be more useful to our working group if it was easier to deal with the databases we have in Lotus Notes.

Lack of opportunity and employer attitude categories each garnered 9% of the responses, with such comments as, "*[I am] able to do other work if given the opportunity.*" and "*I have a four-year degree, life experiences, and skills that I can't seem to get employers to accept.*"

In 5% of the responses, lack of transportation was the problem. For example, one respondent wrote, "*Upper level jobs require mobility and virtual offices.*" Physical reasons were cited in 3% of the responses, while 7% of the responses included various other reasons.

Firings, layoffs, and resignations. Only 18% of the respondents had ever been fired from a job, laid off, or told to resign because of their visual disability. In 32% of the responses, no additional explanation was offered. One person stated, "*I was a teacher and they let me go after one semester because of blindness.*" In another case, a school administrator was told to resign "*due to loss of sight.*" Another person wrote, "*I was hired and then told there was no job for me and they hadn't intended to hire me.*"

Other respondents cited employer attitudes and safety issues as reasons (32% of responses). Responses included, "*[The] employer actually stated that a blind person could not do a sighted person's job, after I had been doing it for three years.*" and "*They told me it was a safety issue after seven years of working there.*"

In 23% of the responses, respondents were fired, laid off, or asked to retire due to their visual disability because they lacked proper skills and adaptive equipment.

> *[It was due to] productivity problems. I had not acquired [the] proper skills of blindness and made the transition.*

> *Yes, my first job as an attorney ended partly because of nepotism and partly because, without a Braille printer or word processor, I couldn't check my work/produce adequately and wasn't as efficient as others.*

Almost 13% of the responses noted that they were fired, laid off, or asked to resign because sight was viewed as a necessary component of the job.

> *In 1981, [I was] forced to retire from [military] due to disability (blindness).*

> *I taught at a local prison. When I got the designation "legally blind," I became a security risk and was forced to take a medical disability.*

Access to training programs. Almost a quarter of the respondents (24%) were denied access to a training program because of their visual disability. Twenty-four percent of the respondents offered no further specific explanations. For example, they wrote, "*For some time, I worked with deaf-blind people. This meant I had to learn some sign language. I was not accepted into an interpreter training program because of my visual disability. I was fortunate enough to find private tutors.*"

Among those offering explanations, 38% of the responses indicated that training programs were not accessible to them.

> *All training opportunities may not be fully accessible as materials are prepared for sighted individuals.*

> *Training programs are not usually able to accommodate with Braille material or material to be scanned before the session. Even though there was a class for the blind, the materials were too late and I had problems keeping up with the rest of the class. Our*

department of services for the blind wasn't ready to assist as promised. Lost booklets and materials were found too late for me to catch up.

I feel since training programs are designed for folks with a certain amount of vision, I often can't get the most out of it.

In 30% of the responses, employers' attitudes and safety concerns were the reasons respondents were denied access to training programs.

I was denied the opportunity to train for a lightbulb changing job because the supervisor thought I would fall off of ladders.

It would be difficult to prove, as statements were made verbally, not in writing, and steps were taken to give the appearance of legitimacy. Situations were connected with state and county level positions where the personnel were simply closed-minded to blind employees.

In the 1960s I attempted to enroll in an aircraft mechanics course at a junior college. The instructor was enthusiastic and willing to work out problems. The FAA representatives declared flatly that they would never allow me to take the required federal examination under any circumstances. At that time, I didn't know any mean lawyers!

Eight percent of the responses cited lack of transportation as the reason they had been denied access. One respondent wrote, "*The adaptive equipment I use sometimes requires different arrangements (i.e., how to get the CCTV to the training location). This is an extra expense and an added difficulty.*"

Job Search

Sources of help for locating jobs. Respondents were provided a list of how people might look for jobs. They were asked to identify the sources of advice or help they used to look for their current or past jobs. Most respondents used friends (77%), state rehabilitation agencies (62%), and newspapers or job listings (51%) in their job search. Others used relatives (43%), teachers or school personnel (42%), state employment agencies (24%), employers (21%), books about job-finding (19%), private employment agencies (18%), other state agencies (9%), or the Internet (4%).

Other sources identified by 25% of the respondents included networking, direct business contacts, and government and rehabilitation contacts. Forty-four percent of the responses mentioned networking with coworkers, customers, and others. Two respondents wrote, "*Most jobs I have found have been through network connections within the field in which I was working or seeking work.*" and "*[I received help from] professional networking.*"

Forty-one percent of the responses described direct business contacts in their search for employment. Another 16% of the responses mentioned government and rehabilitation contacts.

Direct business contacts:

[I made] cold canvassing.

[I received help from] job fairs [and] telephone books.

Government and rehabilitation contacts:

[The state rehabilitation agency] referred me to company.

I got help from a now nonexistent Social Work Vocational Bureau. Once I sought help from Jobs with Industry, now called Hireability.

Most helpful sources for locating employment. Respondents were next asked which of the following sources listed from the previous question were the most helpful. An almost equal number of responses chose significant others and friends (27%) and state rehabilitation agencies (26%).

Significant others and friends:

Friends read advertized job listings to me and helped me complete the paperwork to apply for jobs.

Friends challenged me, gave me opportunities to discover and utilize my capabilities, and build self-esteem.

State rehabilitation agencies for people with visual disabilities:

[The] rehabilitation counselor was most helpful. This agency helped me with moving or relocating, and with the transition from not working to being employed.

[The] state agency for the blind helped me find both my jobs or rather three jobs which I probably would not have gotten without their help. "Dark Room" work is not common anymore, but like chair caning and piano tuning, it has been used to help people who are blind find and keep jobs for a long period of time, as was the vending program.

Each of the following three categories received about 10% of the responses: relatives (9%), teachers or other school personnel (12%), and networking (11%).

Relatives:

My father worked for the state at the time and provided contacts and transportation for the job interview.

[I have a] very supportive wife [who] helped with transportation/orientation, and job contact (Violin shop).

Teachers or other school personnel:

With regard to my present employment, my school district made interview appointments with credentialed candidates through the university placement office.

My first employment in social welfare was mostly helped by teachers' recommendations.

Networking:

Nearly every job I have ever had, I have found through a personal contact that I developed through networking. In addition to having the skill to perform the duties of the job, developing a personal relationship helped pave the way to the opportunity to demonstrate my capability to perform the duties of the job. Having the employer basically on your side when demonstrating alternative methods of performing their job, certainly is an advantage in landing the job.

From employment with my present employer (almost four years), a contact from the University I attended as an undergraduate informed me of the job opening. I had already graduated and had kept in touch with him. Networking and keeping in contact with people is very important.

Other helpful sources for locating employment were the newspapers, job listings, or job fairs (7%); the Internet (2%); private employment agencies (1%); and employers (2%). Remaining responses (4%) included threatened legal action by coworkers, self-confidence, and persistence.

Newspapers, job listings, job fairs:

JOB Opportunities for the Blind program operated by NFB [National Federation of the Blind] led me to my current job. It was announced on the quarterly cassette "JOB Recorded Bulletin" in an accessible format (tape).

Internet:

[The most helpful resource was] the Internet resources that I myself provide (website, discussion group) because it provides me with nationwide and global access to information, exposure, and contacts for marketing.

Private employment agency:

[The] private employment agency helped me get an internship and lent moral support.

Employer:

Other employers on the job helped me in obtaining my second job when I was outsourced.

Most important things done by significant other. Respondents were asked "What was the most important thing your significant other (spouse, parent, roommate) did to help you become employed?" The majority of respondents (46% of responses) described the encouragement they had been given by their significant other.

[My significant other] strongly and persistently encouraged me to work while talking with me about my concerns and fears. Boosted my confidence to broad disability issues (e.g., accommodations with employers).

Parents [encouraged me by] never saying "no" to anything I wanted to try if they could help it, even on a relatively low income.

My wife encouraged me when I received rejection letters and lost confidence in myself.

Other supports provided by significant others included transportation (24% of responses) and clerical assistance, including readers (16% of responses).

Transportation:

[My significant other] provided transportation and assistance when I needed it.

[My significant other] took me back and forth to [center] for training, and back and forth to [city] when I started working there.

Clerical assistance:

They provided help in reading vast amounts of printed information so I could keep up with the demands of my work. My employers provide readers, but the readers are not qualified to do their jobs and outside help is necessary.

[My significant other] helped me check newspapers and job listings and helped me fill out applications.

Other important services provided by significant others included fulfilling domestic duties (4% of responses), providing adaptive equipment and accommodations (3% of responses), securing job leads (3% of responses), providing financial support (3% of responses), and various other supports (1% of responses).

Domestic duties:

She has freed my time for better things than a slow and mediocre performance of home chores (she does most and I do a few).

Adaptive equipment and accommodations:

My mother learned Braille when I was a baby, taught me to read, and spent endless hours Brailling books so I could have a great experience in public schools.

Job leads:

My spouse gave me a valuable job lead which turned into full-time employment.

Financial support:

My wife worked in her profession to pay my way to get this company started and has handled the financial management of the company.

Most important things done by employer. Respondents were also asked, "What was the most important thing your current employer did to help you become or remain employed?" Employers provided adaptive equipment and accommodations; offered encouragement and assistance; provided education and training; provided clerical assistance, readers, and drivers; and allowed flexibility. In 35% of the responses, employers provided adaptive equipment and accommodations.

My employer bore the total significant cost (possibly a write-off of some kind) of equipment adaptation.

[My employer] made reasonable accommodations and gave technical assistance.

My employer is constantly aware of problems that I face in the computer industry. My employer is always ready to procure the latest technology to help me keep up technically with my peers. The problem is usually there is not enough adaptive technology to keep up. For example, it would be nice to have a reliable screen reader for Windows NT.

A large percentage of employers (21% of responses) offered encouragement and assistance to their employees with visual impairments.

[My employer] showed me respect as a competent professional and expected me to meet the same standards as my coworkers.

[My employer] assumed that I could successfully perform the job and gave me the chance to prove it.

[My employers] were friendly and offered encouragement.

Employers also provided education and training (16% of responses); clerical assistance, readers, and drivers (15% of responses); and allowed flexibility in time, job duties, and location (13% of responses).

Education and training:

[My employer] sent me to [university] for training and also provided computer training.

[My employer has] given me time off from my regular duties to learn new skills, primarily in the area of technology.

Clerical assistance, readers, and drivers:

[My employer] provided me with a driver and reader assistant.

[My employer] pays for readers and drivers on an as-needed basis to an annual limit that I have stated to them to be what I feel is necessary. Rarely do I have to use readers or drivers, even half as much as I estimated, but it is nice to know they will be paid for if I need them.

Flexibility:

[My employers] allowed me to "slow down the tenure clock" on account of my disability.

[My employer is] cooperative and allowed me to try various work assignments.

Barriers to Employment

Respondents were provided a list of barriers that might discourage someone from looking for work. They were asked to check each barrier that affected them when they were looking for their current or previous job. The 28 barriers were grouped into seven general domains based on factor analysis (transportation; attitudes; loss of benefits; lack of skills; problems with equipment, computers, or print access; problems with family; and other reasons). Additional comparisons were made using One-Way analysis. The factors for each One-Way analysis were age of vision loss (birth through age 2, between the ages of 3 and 20, 21 years and older); annual income (less than $24,999, $25,000 to $39,999, $40,000 or more); functional vision (none, "very little," "quite a bit"); and school type (regular public or private school, school for the blind, both regular school and school for the blind). Relative differences within the three groups are shown in each table. Readers should note that underlined groups indicates that the two groups are *not* significantly different by Fisher's Least Significant Differences test at the .05 level. For example, the following table shows V1 and V2 with a common underline *and* V2 and V3 with a common underline. This indicates that V1 and V2 do not differ from one another, and V2 and V3 do not differ from one another. However, V1 and V3 do statistically differ from one another. Therefore, it can be stated that respondents with "quite a bit" of vision had more problems with transportation than respondents with "no vision."

Transportation. The majority of respondents identified problems with transportation. Sixty-seven percent had problems finding and accessing transportation. Respondents with "quite a bit" of vision had more problems with transportation (80%) than respondents with no vision (61%).

Barriers to Employment	F-Ratio	Functional Vision		
Finding and accessing transportation	3.10	V1	V2	V3
		.61	.62	.80

Note: V1 = no vision, V2 = "very little" vision, V3 = "quite a bit" of vision.

Attitudes. Under the general domain of attitudes, 69% of the respondents experienced problems with employers' attitudes about blindness, 57% with discrimination in hiring, 48% had problems locating information about possible jobs, and 43% with the general public's attitude about blindness. Unfortunately, 36% of the respondents had problems with the skills or attitudes of rehabilitation counselors or placement staff.

Adventitiously blind respondents were more likely to experience problems with discrimination in hiring than were congenitally blinded respondents. Specifically, respondents who became visually impaired after age 2 or older were more likely to experience problems with discrimination in hiring (57% to 66%) than were respondents who became visually impaired at age 2 or younger (33%).

Barriers to Employment	F-Ratio	Age of Vision Loss		
Discrimination in hiring	5.13	A3	A2	A1
		.33	.57	.66

Note: A1 = 2 years of age or younger, A2 = between 2 and 21 years of age, A3 = 22 years or older.

Respondents with less vision had more difficulties locating information about possible jobs (54% to 56%) than respondents with the most vision (33%). Respondents with no vision had more problems with the skills or attitudes of rehabilitation counselors or placement staff (48%) than respondents with some vision (25% to 28%). Respondents with "very little" vision had almost twice as many problems with the general public's attitude about blindness (62%) than respondents with no vision (34%).

Barriers to Employment	F-Ratio	Functional Vision
Locating information about possible jobs	3.94	V3 V2 V1 .33 .54 .56 _____
Skills or attitudes of rehabilitation counselors or placement staff	4.16	V3 V2 V1 .25 .28 .48 _____
General public's attitude about blindness	4.10	V1 V3 V2 .34 .42 .62 _____ _____

Note: V1 = no vision, V2 = "very little" vision, V3 = "quite a bit" of vision.

Respondents with incomes less than $25,000 had more problems with the general public's attitude about blindness (58%) than respondents who earned $40,000 or more (30%). In addition, respondents with less income had more problems with their rehabilitation counselor's skills or attitudes (41% to 46%) than respondents with greater incomes (21%).

Barriers to Employment	F-Ratio	Income Level
General public's attitude about blindness	4.28	I3 I2 I1 .30 .45 .58 _____ _____
Skills or attitudes of rehabilitation counselors or placement staff	4.05	I3 I2 I1 .21 .41 .46 _____

Note: I1 = less than $25,000, I2 = $25,000 to $39,999, I3 = $40,000 or more.

Loss of benefits. Loss of benefits was not much of a problem for most respondents. Only 18% feared loss of benefits (e.g., SSI, SSDI, or other sources of income); 8% were concerned about loss of medical insurance (e.g., health insurance, Medicaid); and 4% with loss of housing. Respondents with limited income (less than $25,000) were the most concerned about loss of benefits (36% compared to 5% to 11%).

Barriers to Employment	F-Ratio	Income Level		
Loss of other benefits (SSI, SSDI, etc.)	10.57	I3	I2	I1
		.05	.11	.36

Note: I1 = less than $25,000, I2 = $25,000 to $39,999, I3 = $40,000 or more.

Lack of skills. Some respondents believed they were not prepared for employment because they lacked relevant work experience (27%), lacked job skills (17%), lacked job training (17%), lacked education (10%), or possessed poor interviewing skills (10%). Possibly as a result of these deficits, 17% held a poor self-concept.

Many differences appeared within this group when age of vision loss, degree of functional vision, income level, and school type were examined using One-Way analysis. Respondents who lost their vision at an earlier age (32% to 33%) were more likely than respondents with an adult onset vision loss (3%) to believe their lack of work experience was a barrier to employment. Respondents with a congenital vision loss (25%) were more likely than respondents with a later vision loss (5% to 7%) to identify lack of job skills as a barrier to employment. Respondents with a congenital vision loss were more concerned about lack of job training (25%) than respondents with adult onset of vision loss (0%). Respondents with a congenital vision loss were also more concerned about poor interviewing skills (16%) than were adventitiously blinded respondents (0% to 2%).

Barriers to Employment	F-Ratio	Age of Vision Loss		
Lack of relevant work experience	5.49	A3	A1	A2
		.03	.32	.33
Lack of job skills	5.99	A2	A3	A1
		.05	.07	.25

Lack of job training	5.92	A3 A2 A1 .00 .12 .25
Poor interviewing skills	5.48	A3 A2 A1 .00 .02 .16

Note: A1 = 2 years of age or younger, A2 = between 2 and 21 years of age, A3 = 22 years or older.

Respondents with the smallest incomes were more likely to identify lack of job skills (30%) than respondents with the largest incomes (7%). Respondents with small to medium incomes were more likely to cite lack of job training as a barrier to employment (23% to 32%) than respondents with the largest incomes (2%). Respondents with an income less than $25,000 were more likely than the other two groups to believe lack of education affected employment (22% compared to 4% to 7%).

Barriers to Employment	**F-Ratio**	**Income Level**
Lack of job skills	5.09	I3 I2 I1 .07 .16 .30
Lack of job training	9.57	I3 I2 I1 .02 .23 .32
Lack of education	5.47	I3 I2 I1 .04 .07 .22

Note: I1 = less than $25,000, I2 = $25,000 to $39,999, I3 = $40,000 or more.

Finally, students who attended schools for the blind tended to identify more problems with job training (44%) than students from other educational backgrounds (12% to 21%). They were also more likely to cite poor interviewing skills (25%) than students who attended regular public or private schools (6%).

Barriers to Employment	F-Ratio	Type of School
Lack of job training	5.46	S1 S3 S2 .12 .21 .44
Poor interviewing skills	3.47	S1 S3 S2 .06 .14 .25

Note: S1 = Regular public or private school, S2 = school for the blind, S3 = attended both regular school and a school for the blind.

Problems with equipment, computers, or print access. Access to print and computers continue to be problems for employees with visual impairments. Over half of the respondents experienced employment barriers because they were not able to read printed materials (53%). One fourth (25%) faced barriers caused by graphical user interfaces (GUI), while 18% did not know how to use a computer. Twenty-seven percent needed money to obtain equipment and 24% faced lengthy delays in securing equipment.

As expected, respondents with less vision had more problems accessing printed materials (59% to 74%) than respondents with "quite a bit" of vision (29%). Respondents with "very little" vision had more problems with computers (28%) than respondents with no vision (10%).

Barriers to Employment	F-Ratio	Functional Vision
Not being able to read print materials	11.70	V3 V1 V2 .29 .59 .74
Not knowing how to use a computer	3.15	V1 V3 V2 .10 .20 .28

Note: V1 = no vision, V2 = "very little" vision, V3 = "quite a bit" of vision.

Respondents with incomes between $25,000 and $39,999 had more problems with Window environments and GUIs (34%) than respondents with larger incomes (14%). Respondents with the smallest incomes (less than $25,000) had more problems accessing computers (30%) and finding money for equipment (40%) than respondents earning more than $40,000 (7% for computer knowledge and 16% for equipment money). Respondents in the middle income group (between $25,000 and $39,999) were more likely to experience equipment delays (39%) than respondents with the largest incomes (13%).

Barriers to Employment	F-Ratio	Income Level		
Not knowing how to use Windows/GUIs	3.11	I3	I1	I2
		.14	.31	.34
Not knowing how to use a computer	4.89	I3	I2	I1
		.07	.18	.30
Lack of money for equipment	3.98	I3	I2	I1
		.16	.32	.40
Lengthy delays in obtaining equipment	4.76	I3	I1	I2
		.13	.26	.39

Note: I1 = less than $25,000, I2 = $25,000 to $39,999, I3 = $40,000 or more.

Problems with family. The majority of respondents did not experience any barriers to employment that were due to family influences. Only 7% identified barriers caused by family responsibilities, and 6% were discouraged from seeking employment by family or friends. Respondents earning the smallest incomes (less than $25,000) were more likely to be discouraged from working by family and friends (14%) than respondents earning more income (2% to 4%).

Barriers to Employment	F-Ratio	Income Level		
Discouragement from family or friends	3.36	I2	I3	I1
		.02	.04	.14

Note: I1 = less than $25,000, I2 = $25,000 to $39,999, I3 = $40,000 or more.

Respondents who attended a combination of regular schools (either public or private) and schools for the blind were more likely than other respondents to experience barriers due to family responsibilities (17% compared to 0% to 5%).

Barriers to Employment	F-Ratio	Type of School		
Family responsibilities	3.79	S2	S1	S3
		.00	.05	.17

Note: S1 = Regular public or private school, S2 = school for the blind, S3 = attended both regular school and a school for the blind.

Other reasons. Lack of available jobs in the community was cited as a barrier by 36% of the respondents. Twelve percent were concerned about the possibility of being denied a promotion or transfer, and 6% believed that potential employers thought they were too old to hire. Thirteen percent believed their serious visual disability created barriers to employment, while 4% had other serious health problems creating barriers to employment. Additional barriers to employment were specified by 14% of the respondents.

Respondents with "very little" vision were more likely to identify other serious health problems as a barrier to employment (11%), than those with no vision or "quite a bit" of vision (1% to 2%).

Barriers to Employment	F-Ratio	Functional Vision		
Other health problems are too serious	3.39	V1	V3	V2
		.01	.02	.11

Note: V1 = no vision, V2 = "very little" vision, V3 = "quite a bit" of vision.

Lack of jobs in a community was more likely to be identified as a barrier by respondents earning less than $25,000 (50%) than respondents earning more than $40,000 (25%).

Barriers to Employment	F-Ratio	Income Level		
Lack of available jobs in the community	3.90	I3	I2	I1
		.25	.32	.50

Note: I1 = less than $25,000, I2 = $25,000 to $39,999, I3 = $40,000 or more.

Other barriers specified by respondents include attitude of others, lack of adaptations and skills, problems with transportation and mobility, financial problems, and various other reasons. The majority of responses (33%) indicated that the attitude of others was a barrier to locating employment.

[My barrier is] too many people wanting me to be an advocate when I need to work to support my family.

[My barrier is] repeated notions that I was "overqualified."

The lack of adaptations and skills was a barrier in 22% of the responses, as were problems with transportation and mobility (22% of responses).

Adaptations and skills:

I hadn't lived independently among society, so I had minimal skills to teach others how to do so.

[My barriers include] inability to access information that is presented graphically on paper or on a computer, lack of technical support for adaptive equipment and its interfacing with the work environment, and lack of training and documentation in order to use equipment in the most effective way.

Transportation and mobility:

Transportation is a factor to me, since I have tended to live some distance from where I work. I currently live 25 miles from even the nearest public transportation, so I own and operate a commuter van pool in order to guarantee a ride to work. Transportation could become an issue again if I was considering a new job that was located in an out-of-the-way place.

Financial reasons were a concern in 11% of the responses. One person wrote, "*[There is] not enough pay to compensate for purchasing equipment and hiring readers.*" Other reasons (11%) included such statements as "*racial prejudice*" and "*discrimination against fat people.*"

Summary. In general, the barriers experienced by the majority of respondents are employers' attitudes about blindness (69%), finding and accessing transportation (67%), discrimination in hiring (57%), not being able to read print materials (53%), and difficulty locating information about possible jobs (48%).

Vocational Rehabilitation Services

Receipt of vocational rehabilitation services. Vocational rehabilitation services are traditional avenues to counteract barriers to employment. In fact, 92% of the respondents received state vocational rehabilitation services at one point in their lives.

Vocational rehabilitation agencies offer a number of services dealing with employment-related skills and preparing clients for employment. Sixty-six percent received financial assistance for educational expenses; 48% were provided readers; 34% were given actual and appropriate job leads; 30% received information about jobs matching their skills, abilities, and interests;
28% received training in job skills (other than education or computer training); 26% received employment-related counseling for themselves or their families; 17% received on-the-job training; 15% received assistance in developing a resume; and 8% were referred to an employment agency.

For the majority of respondents, vocational rehabilitation agencies purchased equipment, aids, and devices (59%) or computer equipment (31%). A third of the respondents (33%) were provided training in computer usage. Vocational rehabilitation agencies purchased tools or uniforms for only 9% of the respondents.

Additional services were received by 15% of the respondents. Other services included job placement and support services (19% of responses), activities of daily living assistance (19% of responses), financial assistance (19% of responses), Braille training (14% of responses), counseling and support services (14% of responses), and other services (14% of responses). One respondent provided the following example of counseling and support services: "*Those counselors who are blind served as role models for working adults.*"

In general, the majority of services provided by vocational rehabilitation agencies included financial assistance for educational expenses (66%); purchase of equipment, aids, or devices (59%); training in orientation and mobility skills (59%); and readers (48%).

Most important service received from vocational rehabilitation agency. Respondents were also asked, "What was the most important thing your rehabilitation counselor did to help you become employed?" The majority (31% of responses) felt that the most helpful thing their counselors did was to help locate jobs, including setting up interviews, contacting employers, and providing references.

> *They told businesses about the people they have looking for work. They promoted blind people as people first, who happen to have little or no sight.*

> *[They] set up interviews and helped set up a routine for getting to and from jobs.*

Another large group of respondents (27% of responses) cited education and training as the most important services their rehabilitation counselor provided for them:

> *My rehabilitation counselors (I had two others later) were all very good about keeping up the support for paying readers, books, and tuition. Back in those days, there was not really much in the way of expensive technology, just tape recorders and Braille writers, so there was not much else to think about.*
>
> *[My rehabilitation counselor] convinced me to go to college at the age of 29 and obtain a master's in counseling at the age of 36.*

Providing equipment was deemed the most important in 14% of the responses, while in another 13% of the responses, the emotional support and counseling provided by the rehabilitation counselor was the most important.

Equipment:

> *[My rehabilitation counselor] provided [a] low vision evaluation and aids for my current job.*
>
> *He agreed to provide a CCTV and large print display equipment which made it possible for my employer to hire me at no additional cost.*

Emotional support and counseling:

> *[My rehabilitation counselor] treated me as a <u>normal</u> person who needed only to acquire some important alternatives and practical skills in order to pursue <u>my</u> dreams (not what they thought I should or could do).*
>
> *[The most important thing was] probably encouraging me to keep working and not give up and pointing out that others had done what I was trying to do.*

Readers were important provisions from the rehabilitation counselor, as noted in 8% of the responses. Financial support (3% of responses) and travel assistance (3% of responses) were also noted as important.

Readers:

> *The most important thing my rehabilitation counselor did was to pay for reader service hours.*
>
> *He also hired a reader while I was waiting for equipment to arrive, to read the programming manuals.*

Financial support:

[The rehabilitation counselor] provided partial payment of salary for [the] first few months.

Travel assistance:

His greatest contribution to my search for employment was assistance with the cost of public transportation.

One time I was even given a check to buy a bike so I could get back and forth to work.

Relationship of Barriers to Vocational Rehabilitation Services Received

At first glance, the next logical step in the analysis was to correlate barriers to employment with vocational rehabilitation services received. An expected outcome would be the receipt of vocational rehabilitation services in a specific area (such as computer training) would lessen a perceived barrier (such as not knowing how to use a computer). Unfortunately, limitations in the database did not allow this comparison. It was not known when vocational rehabilitation services were received in relationship to encountering the perceived barriers. Furthermore, it was not known how helpful the services were to the client in reducing their barriers to employment.

In general, it can be stated that barriers to employment affecting the most respondents are being addressed by vocational rehabilitation agencies. For example, 67% of the respondents had difficulty finding and accessing transportation. Vocational rehabilitation agencies taught orientation and mobility skills to 59% of the respondents, taught the use of transportation services to 32%, provided financial assistance with transportation to 26%, and provided rides to interviews or work for 13%.

Fifty-three percent of the respondents had difficulty reading print materials. Vocational rehabilitation agencies provided readers to 48% of the respondents. Also, 48% of the respondents had difficulty locating information about possible jobs. In turn, vocational rehabilitation agencies provided actual and appropriate job leads to 34% of the respondents, and job information which matched clients' skills, abilities, and interests to 30%.

A minor service provided by state vocational rehabilitation agencies is providing information about benefits. Eight percent were told how working would affect their benefits, while 3% learned about medical insurance issues from their rehabilitation counselor. However, with less than 20% identifying loss of medical insurance (8%) or other benefits (18%) as barriers to employment, this appears to be an appropriate response.

The following table identifies some of the ways that vocational rehabilitation agencies might address barriers to employment as identified by respondents.

Barriers to Employment (%)	Related Vocational Rehabilitation Services (%)
Employers' attitude about blindness (69%)	
Finding and accessing transportation (67%)	Training in O&M skills (59%) Assistance in learning to use transportation services (32%) Financial assistance with transportation (26%) Rides to interviews or work (13%)
Discrimination in hiring (57%)	
Not being able to read print materials (53%)	Purchase of other equipment, aids, and devices (not computers) (59%) Readers (48%) Training in computer skills (33%) Purchase of computer equipment (31%)
Locating information about possible jobs (48%)	Actual job leads that were appropriate for you (34%) Information about jobs to match your skills, abilities, and interests (30%) Referral to an employment agency (8%)
General public's attitude about blindness (43%)	
Skills or attitudes of rehabilitation counselors or placement staff (36%)	
Lack of available jobs in the community (36%)	Actual job leads that were appropriate for you (34%) Information about jobs to match your skills, abilities, and interests (30%) Referral to an employment agency (8%)
Lack of money for equipment (27%)	Purchase of other equipment, aids, and devices (not computers) (59%) Purchase of computer equipment (31%)
Lack of relevant work experience (27%)	Actual job leads that were appropriate for you (34%) Information about jobs to match your skills, abilities, and interests (30%) On-the-job training (17%)
Not knowing how to use Windows/GUIs (25%)	Training in computer skills (33%)
Lengthy delays in obtaining equipment (24%)	Purchase of other equipment, aids, and devices (not computers) (59%) Purchase of computer equipment (31%) Purchase of tools or uniforms for work (9%)

Loss of other benefits (SSI, SSDI, etc.) (18%)	Information about how working would affect benefits (8%) Information regarding medical insurance issues (3%)
Not knowing how to use a computer (18%)	Training in computer skills (33%)
Lack of job skills (17%)	Financial assistance for educational expenses (66%) Actual job leads that were appropriate for you (34%) Training in computer skills (33%) Information about jobs to match your skills, abilities, and interests (30%) Training in other job skills (not computers) (28%) On-the-job training (17%)
Lack of job training (17%)	Financial assistance for educational expenses (66%) Actual job leads that were appropriate for you (34%) Training in computer skills (33%) Information about jobs to match your skills, abilities, and interests (30%) Training in other job skills (not computers) (28%) On-the-job training (17%)
Poor self-concept (17%)	
Visual disability is too serious (13%)	
The possibility of being denied a promotion or transfer (12%)	Counseling for you or your family on your employment (26%)
Lack of education (10%)	Financial assistance for educational expenses (66%) Actual job leads that were appropriate for you (34%) Training in computer skills (33%) Information about jobs to match your skills, abilities, and interests (30%) Training in other job skills (not computers) (28%)
Poor interviewing skills (10%)	Training in other job skills (not computers (28%) Assistance in developing a resume (15%)
Loss of medical insurance (8%)	Information about how working would affect benefits (8%) Information regarding medical insurance issues (3%)
Family responsibilities (7%)	Counseling for you or your family on your employment (26%)
Discouragement from family or friends (6%)	Counseling for you or your family on your employment (26%)
Potential employers thought I was too old to hire (6%)	Counseling for you or your family on your employment (26%)
Loss of housing (4%)	
Other health problems are too serious (4%)	

Helpfulness of Vocational Rehabilitation Agency Services

Respondents were provided a list of ways that vocational rehabilitation agency services were helpful in their current employment situation. More than a third of the respondents who had received services believed vocational rehabilitation was helpful in obtaining jobs (39%) or improving their job performance (34%). Respondents also believed that vocational rehabilitation services made them more competitive with nondisabled workers (28%) and assisted them in retaining their current jobs (25%). A smaller number of respondents obtained skills to independently find future jobs (15%), to improve their ability to communicate with others (12%), to improve their ability to participate in interviews (10%), and to improve their ability to obtain better jobs (8%).

Respondents were also asked if the rehabilitation services they received helped in some other way. Their responses included education and training (44% of responses), equipment and adaptations (24% of responses), job placement and support services (20% of responses), and other services (12% of responses).

Education and training:

> *[I received] rehabilitation teaching services and college education in blind services.*
>
> *I got to attend a college preparatory program for the blind in the summer of 1970 after graduation from high school where I learned better techniques for taking notes and got more practice in cane travel.*

Equipment and adaptations:

> *[I was] provided [a] low vision evaluation which was very extensive and [was] provided low vision aids.*
>
> *[Vocational rehabilitation agency] purchased equipment for any blind potential employer.*

Job placement and support services:

> *He is always willing to talk to employers and answer their questions, no matter what the subject matter is.*
>
> *Training provided me with information to more safely get around the workplace and especially to exit the building with no assistance in [the] event of [an] emergency.*

Other services:

[Rehabilitation counselor was the] cheerleader when things did not go well.

My first job through rehabilitation help was many years ago. That help provided a foundation on which whatever followed rested. You might as well ask, "Does having been fed as a child help you get a job?"

Helpfulness in Obtaining Jobs (Strategies for Obtaining Jobs)

Respondents were presented with a list of 16 items or statements and asked to select a number from 1 to 5 to indicate how helpful the item was in obtaining the current or previous job. Having an education and having previous work experience were rated as the most helpful (both scored 4.33), followed by being able to get around by yourself (4.25), and having a positive attitude (4.09). Rated average in importance was being assertive (3.97), having adaptive equipment (3.94), having a relative or friend who helped locate the job (3.54), receiving orientation and mobility training (3.47), receiving computer training (3.41), being inspired by someone with a visual disability (3.20), receiving job skills training (3.12), and knowing the employer before being hired (3.01). Rated less helpful was provision of transportation (2.73), working with a rehabilitation counselor (2.71), and receiving interview training (2.57).

Lifestyle Changes Due to Visual Disability

Many people make decisions about their lifestyles when trying to find or keep a job. For example, a person may move from an area with few jobs to an area where more jobs are available. Respondents were asked if they had made similar lifestyle choices that were influenced by their visual disability. Of the 100 responses, the majority (48% of responses) focused on transportation issues:

I choose to live in the city where transportation is readily available and in a part of the city where the transportation reaches. I schedule work hours to coincide with transportation hours. I also walk a lot.

My primary lifestyle choice has been to live within walking distance of my job. This has limited my choice of jobs (many major academic medical centers are in the slums of big cities, where I frankly don't want to live).

I have turned down promotions to stay in this city because I can drive during the day here and could not in other cities.

Due to job opportunities, others relocated, planned to relocate, or had fewer job opportunities by staying where they currently live (39% of responses).

Yes, I do not care for large cities, but it is not practical to search for work in rural areas. Thus, I have kept myself in reasonable proximity to [city].

Not yet; I will though. I want to go to a job rich community.

I decided to become self-employed because of my disability.

A small number of respondents (4% of responses) made lifestyle changes due to family concerns.

I moved back to [state] 20 years ago following my divorce because I needed moral and financial support from family members, especially my mother, in rearing my small daughter. If I had moved to a metropolitan area, such as [city], opportunities for employment would have been increased, but my role as a parent came first. Now I wish to stay here. Of course I will reach retirement age in a few years. Also, I want to be here when my mother needs me. Although she is in excellent health, she is now 82 years of age; she provided invaluable assistance to my daughter and me when we moved here.

When I decide to marry, I felt it necessary to move because my employer opposed the marriage of two staff members. I believed I might be replaced more easily than the person I married, so we both moved.

Access to education and access to support systems each received 3% of the responses.

Access to education:

This move placed me closer to a university where I continued my credential preparation.

I am going to school to gain more skills to compensate for not being able to drive.

Access to support systems:

When I left my first job, I made a lifestyle change. I was asked to transfer to another city. My support system and friends were here and I refused to relocate. The support system is very important and I could not leave friends.

The remaining responses (3% of responses) were grouped into one remaining group. Examples of their responses include the following: "*I moved from a rural area to [town] in order to be near good doctors and I think that enabled me to save a tiny speck of vision.*" and "*I moved from the Northeast where I grew up to the Southwest. I didn't want to risk falling on the ice and breaking my wrist as two of my sighted colleagues did one winter. I didn't want to spend a semester playing the Scriabin Prelude and Nocturne for the Left Hand alone!*"

Self-Identified Reasons for Success

Respondents were offered the opportunity to explain why they had been successful in overcoming barriers to employment when many individuals are not successful. Their answers included personal motivation; support from family members and significant others; education and training; credentials, previous job experience, and personal characteristics; a strong work ethic; adaptations; luck and coincidence; legal interventions; blind role models; religious beliefs; later vision loss; mental and physical factors; vocational rehabilitation services; and family responsibilities.

Personal motivation was the theme in 34% of the responses.

[I possess] persistence and irrational exuberance.

I don't sabotage my opportunities by giving my blindness as an excuse for not taking responsibility for my own advancement. I assertively advocate for myself when needed. I do not manipulate others.

[I possess] intestinal fortitude.

In 15% of the responses, respondents linked their success with support from family members or significant others. One person wrote, "*I believe that strength of character is an innate quality over which we have little control, but I was blessed with insightful parents who decided while I was very young, to expect no less of me as a blind child than they would have had I been fully sighted.*"

Education and training made the difference in 13% of the responses. Seven percent of respondents said that credentials, previous job experience, and personal characteristics allowed them to succeed, while 6% cited a strong work ethic.

Education and training:

I sought in-depth practical training from a good program that had a strong belief in the capabilities of blind people.

My "success" has been due to my excellent education at the school for the blind and my computer and Braille literacy.

Credentials, previous job experience, and personal characteristics:

I know the skills I have to offer and do not hesitate to use these skills in situations other than work. I give back to my community as much as they give to me and I have chosen to stay in one place; I am staying. I network well too. And I deal with people honestly and fairly, and do not surprise them. I am a known person, a known quantity. My actions and record speak for themselves. I am not afraid to ask for help when I need it from professionals who know more than I do. I try to adapt and I am a team player, something desired by most large corporations.

I developed a skill and offered a service that was not readily available.

Work ethic:

I expected to be employed; unemployment was not an option.

[I was] raised with a strong work ethic [and a] belief in hard work.

Other causes of success included the availability of adaptations (5% of responses), luck and coincidence (5% of responses), influence of blind role models (3% of responses), personal religious beliefs (3% of responses), later vision loss (3% of responses), personal mental and physical factors (2% of responses), vocational rehabilitation services (1% of responses), family responsibilities (1% of responses), legal interventions or the threat of them (1% of responses), and various other factors (1% of responses).

Suggestions for Others with Visual Disabilities Who Want to Work

Respondents were given the opportunity to offer suggestions to others with visual disabilities who want to work. The majority of responses (27%) centered around determination, persistence, and independence of the individual.

Don't feel it is owed to you; it's not. Be the kind of person you like and others will respect, enjoy, and like you.

Learn to want to help your employer achieve business goals. Don't blame others; stand you ground, but communicate and cooperate with employers to address problems. Employers don't want a problem, they want a solution - prepare your skills and attitude to be that solution.

Be as broad based and well rounded as you can. Do not allow your entire existence to focus on a visual disability.

In 17% of the responses, respondents recommended pursuing education and training. Another group (10% of responses) recommended developing networking and mentoring opportunities.

Education and training:

Pursue education as if you were getting paid for it.

The most important thing is to develop some job skills, either through a college education or job skills training.

Get as much education as you possibly can. I frankly don't understand why so many blind people seem to be satisfied with vocational training, when they should be getting a real college degree. Physical disabilities do not affect the brain, so use your brain!

Networking and mentoring opportunities:

Seek out positive role models (successful people) who are blind and learn from them.

Read about blind people who have been successful. Develop a marital support system (mentors, friends, family).

Talk to as many employed blind people as you can to see what has worked for them.

Setting career goals was the advice given in 7% of the responses. Two respondents wrote, "*Pursue realistic goals. Always pursue goals that are desirable, not just realistic.*" and "*Know what you truly like to do. Work takes up too much time to do otherwise.*"

Individuals were told to seek help from appropriate sources (6% of responses), develop a work history (5% of responses), and locate the right adaptations (5% of responses).

Seek help from appropriate sources:

Don't be afraid to become a rehabilitation client three or more times. Today's society demands it. There is no other way.

Without cheating or hurting anyone else or being dishonest, take everything you can get from schools, agencies, employers, and society; then do it your way!

Learn what you are entitled to from rehabilitation because if you don't know what is available and what you are entitled to, unfortunately, you probably won't get them.

Develop work history:

In the beginning, take any job to be out in the community. Opportunity knocks, but not necessarily at your front door. You have to be noticed as a "doer."

Consider volunteer work to establish relationships and [to] show you "can do." It builds confidence too. I've seen it work for others too.

Locate adaptations:

> *I would suggest that these people have a good grasp of skills such as Braille, computer equipment, and the ability to work with clerical help, such as readers. A degree of adaptive ingenuity also helps. Show an employer how you can do a task. This technique can be very persuasive.*
>
> *You must be able to communicate with yourself (i.e., write something and be able to read what you wrote).*

The respondents also suggested that job candidates perfect their interviewing skills (5% of responses) and job-related skills (5% of responses).

Interviewing skills:

> *Learn to speak and act for yourself. Anticipate what might come and have answers for it.*
>
> *Practice, practice, and practice your interviewing skills (no one is perfect!). Be able to state, "I am able to do this, and I need X accommodation/assistance to do Y."*

Develop job-related skills (even exceptional skills):

> *Demonstrate extraordinary skills in whatever you have decided. People will take chances on knowledge when they won't respond to anything else, especially if that knowledge can solve problems.*
>
> *When someone is really good at what they do, their disability becomes less of an issue in terms of employment. Employers want the most talented people they can find and if you are the most talented person to get the job done, you will have your best chance at getting that job.*

Flexibility was an important trait in 3% of the responses. For example, "*Be flexible and adapt to the situation.*" and "*Be flexible, creative, and willing to take risks.*"

Another group (3% of responses) offered advice on transportation and mobility. Their suggestions included, "*Be the most mobile job-seeker you can.*" "*Learn to travel independently.*" and "*Pick a career field where all duties are performed at a single site with little daily travel (retail businesses, accounting, etc.).*"

Six respondents (2% of responses) recommended that people with visual impairments work to improve their appearance, while another 2% warned about discrimination.

Improve appearance:

Be neat in appearance and have appropriate posture.

We live in a world of the sighted. I believe the blind person should blend in wherever possible. By looking and acting as sighted as possible, a future employer's attention will be diverted from the aspect of blindness and will focus on what skills we have to offer.

Discrimination:

Also, try to be a sport about little problems and save the artillery for major situations like blatant discrimination. It doesn't happen often, but occasionally, it happens. Know your facts and stick to your guns when it is necessary to be firm.

Be willing to spend money on extra readers, etc., that an employer will not provide. Consider the EED process if you are treated unfairly, but do it without malice.

In 1% of the responses, people were encouraged to seek divine intervention: "*Seek divine leadership. Have faith.*" In another 1% of the responses, job candidates were told to accept necessary help. One respondent wrote, "*Help others when you can and be thankful for the considerations of friends who help you. When a stranger offers you help, accept or decline with grace. Be quick to thank that stranger's kindheartedness and slow to think her or him condescending.*"

Discussion

All persons participating in this research project were volunteers, thus creating the typical research biases associated with a volunteer sample (i.e., motivational issues, lack of representation of the entire population, etc.) (Borg & Gall, 1989). Indeed, respondents to this survey are believed to be nonrepresentative of the general population of persons with visual impairments who are employed in that survey respondents are typically more educated, employed in more professional occupations, have fewer secondary health problems, and earn higher salaries. For example, in the study conducted by Moore, Crudden, and Giesen (1994), the average educational level of direct labor workers in industrial settings was 10th grade (as opposed to college graduates) and the mean weekly wage was $191 per week or approximately $9,932 per year. Almost half (45%) of that same sample of 502 legally blind employees reported a major health or physical problem besides blindness, compared to 17% of this sample.

This survey also includes only persons who are severely visually impaired and employed. The issue of employment makes these respondents atypical of the U.S. population of persons who are visually impaired. In a recent review of trends in labor force participation among persons with disabilities, Trupin, Sebesta, Yelin, and LaPlante (1997) estimated a labor force participation (LFP) rate of 28.9% for those adults blind in both eyes in 1994. For those characterized with a visual impairment in both eyes, the LFP rate increased to 59.8% in 1994. For those working age people with a severe functional limitation in seeing print, McNeil (1993) reported an employment rate of 26%; the remaining 74% were either "out of the labor force" or "unemployed."

The literature review examining barriers to employment as perceived by rehabilitation providers finds that providers tend to focus on administrative issues interfering with successful job placement. Training needs and certification issues of rehabilitation professionals in blindness/low vision and placement areas (Maxson et al., 1997); a lack of rehabilitation provider focus on placement, transition, and retention; poor access to employment data; lack of communication among service providers, employers, and clients, (Kirchner et al., 1997); overemphasis on case closure; reliance on segregated employment settings; heavy caseloads (Link, 1975); and failures of the educational system (Hopf, 1991) are all cited by providers as barriers to employment among persons with visual impairments. While some of these same issues were cited by consumers in the literature review and survey, these were not the primary issues, thus indicating that consumers and rehabilitation professionals appear to have divergent views regarding what barriers have the most significant impact on employment for persons with visual impairments.

Rehabilitation providers did recognize that public attitudes and specifically, employer attitudes, negatively impact on employment opportunities (Dahl, 1982; Moore & Wolffe, 1997). Consumers were in strong agreement that attitudinal barriers represent a significant barrier to employment (Dahl; Kirchner et al., 1997; Moore & Wolffe), particularly for women (Corn et al., 1985; Dixon, 1983; Hill, 1989); minorities (Sanderson, 1997); and those living in rural areas (Offner et al., 1992). Research among employers confirmed that these attitudes exist and negatively impact employment for persons with visual disabilities (Wacker, 1976; Woods, 1996).

Other social and community issues negatively influencing employment for persons with visual disabilities included socioeconomic factors, such as low population density, high unemployment rates, low educational levels, low wages, rural culture (Arnold et al., 1996; Sanderson, 1997); transportation factors (Dahl, 1982; Moore & Wolffe, 1997); and lack of housing supports (Moore & Wolffe). The impact of government-generated disincentives on employment was also cited as a barrier by rehabilitation providers (Hopf, 1991; Link, 1975; Moore & Wolffe). Consumers appeared in agreement with some of these issues, particularly those concerning transportation (Malakpa, 1994; McBroom, 1995; Rumrill et al., 1997; Salomone & Paige, 1984; Schriner & Roessler, 1991).

When targeting consumer deficits as the focus of employment-related barriers, rehabilitation providers were most apt to cite lack of employment experience or employment-related skills as an employment barrier (Dahl, 1982; Hopf, 1991; Kirchner et al., 1997; Link, 1975; Moore & Wolffe, 1997). Some consumer reports echoed this assessment (Majumder et al., 1997; Salomone & Paige, 1984; Vander Kolk, 1981). Lack of access to employment information was also cited by rehabilitation providers (Dahl; Kirchner et al.; Moore & Wolffe) and consumers (Salomone & Paige; Schriner & Roessler, 1991; Vander Kolk) as a barrier to employment. Employers, however, were more likely to be concerned about the worker having the skills and abilities to perform necessary job tasks (DeMario, 1992; Greenwood & Johnson, 1985) and providing on-the-job accommodations (Greenwood & Johnson). The issue of potential skill deficits and job accommodations is particularly apparent in technology issues. While access to technology is believed to expand opportunities for persons with visual impairments, remaining current with adaptive methods to utilize technological advances remains a challenge (Melrose, 1995).

Barriers to employment identified by consumers through the national survey were consistent with barriers identified through the literature review. Namely, the primary barriers to employment for persons with visual impairments are employer attitudes, transportation and mobility problems, print access, adaptive equipment and accommodations, and lack of job opportunities. This consistency indicates not only general agreement among consumers regarding what the barriers are, but also that despite the efforts of involved parties, progress is not being made in systematically eliminating or overcoming these barriers. For example, the survey of trends in LFP among persons with disabilities reflects that the LFP rate for persons blind in both eyes dropped from 36.2% in 1983 to 28.9% in 1994 (Trupin et al., 1997).

This national survey confirmed the perception that employer and public attitudes represent an employment barrier for those who are blind. Approximately 41% of persons responding to the survey stated that employer attitudes toward visual disabilities were the biggest problem in getting a job. Additionally, while 82% of the respondents found it difficult to change jobs due to a visual disability, 27% attributed this difficulty to the attitudes of employers. Of those persons who believe it is difficult to advance in their current job due to their visual disability, 11% attributed this difficulty to employer attitudes. Transportation issues have the same limiting impact, with the additional limitation that movement to areas without public transportation is perceived by many as unrealistic.

It is interesting to note that while in both this survey and in the existing literature, employer/public attitudes and transportation remain the most frequently cited barriers to

employment, there is a paucity of research regarding solutions to these barriers. There is also no existing national initiative to directly address these barriers.

Approximately 44% of consumers participating in the national survey attribute their employment to successful networking with coworkers, customers, and others rather than to a service delivery system. Approximately 40% of consumers attribute their ability to become employed to their own direct business contacts through cold calls to employers, job fairs, etc. Consumers were also likely to turn to friends (77%) and/or relatives (43%) for help in finding a job. A much smaller number (16%) attributed their employment to assistance from government agencies, rehabilitation providers, or school personnel. Given rehabilitation providers' awareness of numerous administrative barriers to providing assistance in overcoming barriers to employment, it should come as no surprise that consumers find their own efforts to overcome barriers to employment more effective than reliance on service providers. It appears that when consumers find their independent efforts to remain/become employed are unsuccessful, they turn to rehabilitation providers for assistance; efforts to obtain assistance from service providers are met with mixed, and often disappointing results.

An example of this type of problem is clearly visible when one examines transportation issues for persons with visual disabilities. Transportation issues were reported by consumers as the biggest problem caused by a visual disability in getting a job or changing jobs. Transportation was also a barrier to job advancement and led to underemployment. Yet when asked the most important thing rehabilitation counselors did to help the consumer become employed, only 3% mentioned assistance with travel. Twenty-five percent of consumers stated that the most important thing their significant other had done to help them become employed was providing transportation. It is essential that vocational rehabilitation counselors are fully aware of community resources and agency policies on providing transportation services to vocational rehabilitation clients, particularly during their initial job search and for an appropriate period after they become employed.

Difficulty reading printed materials was listed as the third largest barrier to employment (after employer attitudes and transportation), with 17% of the respondents indicating that problems reading print caused them difficulty in getting a job. Inability to read print was cited by 7% of the respondents who believe they would have a problem in changing jobs and 17% of those who believe it would be difficult for them to advance in their current jobs. Difficulty reading print is likely compounded by difficulty in obtaining adaptive equipment or appropriate training in adaptive equipment. Approximately 19% of those persons who believe they would have difficulty changing jobs and 25% of those who believe it would be difficult for them to advance in their current job attribute these difficulties to problems with adaptive equipment and training. This indicates that while technology has made great strides in improving access to printed materials for persons who are blind, print access continues to be a barrier to employment and that adaptive technology to overcome this barrier remains an ongoing issue for those who are already employed. Of those who reported problems with equipment, computers, or print access, 24% faced lengthy delays in securing equipment. While it is not known how many of those were vocational rehabilitation clients (92% of the respondents reported receiving vocational rehabilitation services at some point in their lives), it is recommended that vocational rehabilitation agency administrators make every effort to streamline procurement/purchasing

guidelines for adaptive equipment and to ensure that vocational rehabilitation counselors are familiar with these guidelines in order to facilitate their expeditious purchase. Many states allow for "state contract" lists which alleviate the need for competitive bids in purchasing certain supplies or equipment. Maximum utilization should be made of such resources in order to avoid unnecessary delays in securing equipment. Likewise, maximum utilization should be made of comparable benefits such as civic or service clubs (e.g., Lions Club, Kiwanis Club, etc.) or other third party resources (e.g., Worker's Compensation, Social Security Administration, etc.) in purchasing needed equipment.

Because this survey was completed by persons who are successfully employed, efforts were directed at identifying the characteristics or conditions which led to their success in hopes that this information would provide insight in helping others overcome barriers to employment. Persons who attempted to explain their employment success were most likely to attribute their success to their personal motivation or to a strong work ethic, a factor over which the worker has control and which rehabilitation providers appear to have limited influence. These characteristics of success are linked with suggestions made by survey respondents to others seeking employment; namely, be determined, persistent, and independent. Respondents also attributed their success to family members and/or significant others. While this may appear to be another factor over which rehabilitation providers have limited control, referral to consumer groups and efforts to develop peer mentoring systems and support groups may generate support systems for those with limited or negative family support.

Conclusions

Differences in perspectives among rehabilitation providers, consumers, and employers indicate that a multifaceted approach is required in overcoming barriers to employment. Each party appears to be aware of particular areas influencing the employment process at different points in the rehabilitation process. These issues appear to be interrelated (i.e., as rehabilitation counselors become more overworked or are less well trained, their efforts to assist consumers overcome the more difficult barriers to employment, such as transportation or employer attitudes, are less effective, and hence rehabilitation services are perceived as less beneficial by consumers). However, in cases where rehabilitation providers are successful in assisting consumers locate employment or obtain education, training, or equipment, these services are perceived as very helpful by consumers.

Employer attitudes and transportation issues continue to be major barriers to employment for persons who are blind. No concerted national effort is currently directed toward resolving either of these issues. While rehabilitation providers are sometimes successful in resolving these issues for individuals, the pervasiveness of these barriers indicates the need for national policy changes or initiatives to overcome these barriers. Such initiatives could include an aggressive public awareness campaign by the Equal Employment Opportunity Commission with regard to complaints filed under Title I of the ADA to help make employers more aware of their responsibilities under Title I. Likewise, maximum utilization must be made of the 10 regional Disability and Business Technical Assistance Centers (DBTACs) in providing information and referral, technical assistance, and training on all aspects of the ADA. Additionally, consideration should be given to developing specific strategies for addressing the barriers by the National Council on Disability and the President's Committee on Employment of People with Disabilities. Such efforts would require the collaborative efforts of these and other federal agencies, particularly as they relate to the enforcement of existing statues and regulatory guidelines.

Although rehabilitation providers, employers, and consumers have differing perspectives regarding employment barriers, all parties agree that employer attitudes, transportation, and access to print continue to be major barriers to employment for persons with visual disabilities. Because the nature of the barriers is well documented it is recommended that future research be directed toward determining how theses barriers are currently being overcome and identifying potentially successful strategies and policies for the future. The RRTC on Blindness and Low Vision at Mississippi State University will pursue this research agenda through intensive interviews with rehabilitation providers who have had success in assisting persons with visual disabilities in overcoming these employment barriers. Focus groups will also be conducted with rehabilitation providers, employers, and consumers to generate additional input regarding which strategies and accommodations have proven helpful in overcoming employment barriers. Other researchers are encouraged to pursue their own efforts to identify strategies to overcome these and other barriers to employment.

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APPENDIX

Overcoming Barriers to Employment

Please read each question carefully, then answer it as completely and accurately as you can. Add additional notes if you feel they will help us better understand your responses. Please remember that this is a confidential survey - no one will know how you answered any question. If you have additional questions or concerns, please call 1-800-675-7782. You may also refuse to answer any or all of the questions. Thank you for taking time to complete our survey and for telling us how you have dealt with barriers to employment.

1. Are you currently employed? _____ YES _____ NO

   If you are currently UNEMPLOYED, please STOP and return the questionnaire at this time. Thank you for your response.

2. Normally, how many hours do you work each week? _____ HOURS PER WEEK

3. What kind of work do you do? Provide JOB TITLE and brief JOB DESCRIPTION:

4. Describe the business or industry in which you are employed. For example, do you work in TV and radio, manufacturing, a retail shoe store, the IRS, a state rehabilitation agency, or a farm?

5. Who is your employer?
   _____ INDUSTRY FOR THE BLIND
   _____ FEDERAL government
   _____ STATE government
   _____ LOCAL government
   _____ PRIVATE company or business
   _____ Self-employed in OWN business, professional practice, or farm
   _____ Working WITHOUT PAY in family business or farm
   _____ OTHER (please explain)

6. How satisfied are you with your current job?
   _____ Very Satisfied
   _____ Satisfied
   _____ Neutral
   _____ Dissatisfied
   _____ Very Dissatisfied

7. What was the BIGGEST problem your visual disability caused in getting a job?

8. Because of your visual disability, have you EVER changed the TYPE or KIND of paid work you do? For example, changed from being a truck driver to telephone sales. _____ YES _____ NO

9. Because of your visual disability, have you EVER changed the NUMBER OF HOURS of work per week for which you are paid?
   _____ YES _____ NO

10. Does your visual disability make it difficult for you to change jobs? If YES, please explain. _____YES _____ NO

11. Does your visual disability make it difficult for you to advance in your present job? If YES, please explain. _____ YES _____ NO

12. Do you feel you are UNDEREMPLOYED? If YES, please explain.
_____ YES _____ NO

13. Do you believe you have EVER been fired from a job, laid off, or told to resign because of your visual disability? If YES, please explain.
_____ YES _____ NO

14. Do you feel you have EVER been denied access to a training program because of your visual disability? If YES, please explain.
_____ YES _____ NO

15. People use many ways to look for jobs. When you have looked for work (including both your current job and past jobs), did you get advice or help from any of the following sources? Please check each item that provided you with advice or help looking for work.

_____ a. Friends.
_____ b. Relatives.
_____ c. Teachers or school personnel.
_____ d. Private employment agency.
_____ e. State employment office.
_____ f. State agency for people with visual disabilities (rehabilitation counselor).
_____ g. Another state agency.
_____ h. Your employer.
_____ i. Newspapers or job listings.
_____ j. Books about job-finding.
_____ k. Internet.
_____ l. Other sources (please specify).

16. Who or what source (from the list in #15) was most helpful to you in finding employment? What was done that was so helpful?

17. What was the most important thing your REHABILITATION COUNSELOR did to help you become employed? **(SKIP this question if you have never worked with a rehabilitation counselor.)**

18. In addition to offering you a job, what was the most important thing your current EMPLOYER did to help you become or remain employed?

19. What was the most important thing your SIGNIFICANT OTHER (spouse, parent, roommate) did to help you become employed? **(SKIP this question if you do not have a significant other.)**

20. Some people encounter barriers that discourage them from looking for work. Please check each potential barrier listed below that concerned you when you were looking for your current or previous job.

_____ a. Employers' attitude about blindness.
_____ b. General public's attitude about blindness.
_____ c. Skills or attitudes of rehabilitation counselors or placement staff.
_____ d. Locating information about possible jobs.
_____ e. Finding and accessing transportation.
_____ f. Discrimination in hiring.
_____ g. Loss of other benefits (such as SSI, SSDI, or other sources of income).
_____ h. Loss of housing.
_____ i. Lack of job skills.
_____ j. Lack of available jobs in the community.
_____ k. Not knowing how to use a computer.
_____ l. Not knowing how to use windows (graphical user interfaces).
_____ m. Lack of money for equipment.
_____ n. Lengthy delays in obtaining equipment.
_____ o. Lack of education.
_____ p. Lack of job training.
_____ q. Lack of relevant work experience.
_____ r. Poor interviewing skills.
_____ s. Poor self-concept.
_____ t. Family responsibilities.
_____ u. Discouragement from family or friends.
_____ v. Not being able to read print materials.
_____ w. Loss of medical insurance (such as health insurance, Medicaid).
_____ x. Possibility of being denied a promotion or transfer.
_____ y. Visual disability is too serious.
_____ z. Other health problems are too serious.
_____ aa. Potential employers thought I was too old to hire.
_____ bb. Any other barriers (please specify).

Now, please think about ANY services you have received from a state rehabilitation agency to help you handle your visual disability. For example, these services could include help with income or training (we do not want to know about medical care).

21. Have you ever received any services from a state rehabilitation agency to help you handle your visual disability? **If you have not received any services, SKIP to Question 24 on page 8.** _____YES _____ NO

22. Did you RECEIVE any of the following services from a state rehabilitation agency for visual disabilities that aided you in finding or retaining a job? Please check each item provided by your state rehabilitation agency.

_____ a. Financial assistance for educational expenses.
_____ b. Training in computer skills.
_____ c. Training in other job skills.
_____ d. Purchase of computer equipment.
_____ e. Purchase of other equipment, aids, and devices.
_____ f. Purchase of tools or uniforms for work.
_____ g. Readers.
_____ h. Assistance in developing a resume.
_____ i. Financial assistance with transportation.
_____ j. Rides to interviews or work.
_____ k. Assistance in learning to use transportation services.
_____ l. Referral to an employment agency.
_____ m. Training in O&M skills (orientation and mobility).
_____ n. Counseling for you or your family on your employment.
_____ o. Information regarding medical insurance issues.
_____ p. Information about how working would affect benefits.
_____ q. On-the-job training.
_____ r. Actual job leads that were appropriate for you.
_____ s. Information about jobs to match your skills, abilities, and interests.
_____ t. Any other services (please specify).

23. In regard to your current employment, did the vocational rehabilitation services you received (check each one that applies to your situation) ...

_____ a. Help you get a job?
_____ b. Help you keep your job?
_____ c. Help you get a better job?
_____ d. Improve your ability to do your job?
_____ e. Make you more competitive with nondisabled workers?
_____ f. Improve your ability to participate in an interview?
_____ g. Improve your ability to communicate with others?
_____ h. Provide you with skills to independently find your next job?
_____ i. Help you in some other way? (please specify)

24. How helpful were the following to you in getting your current or previous job? On a scale from 1 to 5 (with 1 being the least helpful and 5 being the most helpful) score each item by circling a rating for each item. **SKIP items that do not apply to your situation.**

Helpfulness of ...	Least Helpful				Most Helpful
a. Your rehabilitation counselor.	**1**	**2**	**3**	**4**	**5**
b. Computer training.	1	2	3	4	5
c. Orientation and mobility training.	**1**	**2**	**3**	**4**	**5**
d. Interview training.	1	2	3	4	5
e. Job skills training.	**1**	**2**	**3**	**4**	**5**
f. Education.	1	2	3	4	5
g. Positive attitude.	**1**	**2**	**3**	**4**	**5**
h. Relative or friend who helped you get a job.	1	2	3	4	5
i. Being inspired by someone who is visually disabled.	1	2	3	4	5
j. Knowing your employer before being hired.	1	2	3	4	5
k. Being provided transportation.	**1**	**2**	**3**	**4**	**5**
l. Being able to get around by yourself.	1	2	3	4	5
m. Being assertive.	**1**	**2**	**3**	**4**	**5**
n. Having previous work experience.	1	2	3	4	5
o. Having adaptive equipment.	**1**	**2**	**3**	**4**	**5**
p. Anything else? (Please specify.)					

25. What is your race or ethnic background?

_____ White (non-Hispanic)
_____ Black (non-Hispanic)
_____ Hispanic
_____ Native American
_____ Asian
_____ Other

26. What is your gender? _____ Male _____ Female

27. What is the HIGHEST GRADE or year of school you actually completed? For example, eighth grade, high school graduate, two years of vocational school, or four year college degree.

28. Did you attend (Choose ONLY ONE answer) ...

_____ A regular public school.
_____ A school for the blind.
_____ A private school.
_____ Both regular school and a school for the blind.
_____ Other type of school (please explain).

29. Did you have a visual disability before leaving high school?

_____ YES _____ NO

30. Do you read GRADE ONE or GRADE TWO BRAILLE?

_____ NO
_____ YES, I read GRADE ONE Braille
_____ YES, I read GRADE TWO Braille

31. How do you PREFER to read in MOST situations? CHOOSE ONLY ONE ANSWER.

_____ REGULAR PRINT
_____ LARGE PRINT
_____ BRAILLE
_____ TAPE cassette or TALKING book
_____ COMPUTER disk
_____ Other (please explain)

32. Which of the following income groups best reflects YOUR TOTAL income during the past 12 months. Include wages; salaries; retirement income; interest income; dividends; net income from business, farm, or rent; and any other income received. DO NOT include social security, unemployment, public assistance, or SSI.

_____ Less than $9,999
_____ $10,000 to $14,999
_____ $15,000 to $19,999
_____ $20,000 to $24,999
_____ $25,000 to $29,999
_____ $30,000 to $34,999
_____ $35,000 to $39,999
_____ $40,000 to $44,999
_____ $45,000 to $49,999
_____ $50,000 and over

33. Have you limited your income in order to keep other benefits (for example, medical insurance or supplemental security income)?

_____ YES _____ NO

34. What is the primary way you get to work? (Check ONLY ONE answer.)

_____ Paratransit (special service for people with disabilities)
_____ Driven by family member
_____ Own car, employ driver
_____ Public bus
_____ Train/subway
_____ Passenger in car pool
_____ Agency/company van
_____ Taxi
_____ Walk to work or use scooter or wheelchair
_____ Bicycle
_____ I drive myself
_____ Work at home
_____ Other mode of transportation (please explain)

35. Where do you live? (Choose ONLY ONE answer)

_____ Large city (more than 100,000 people).
_____ Suburb of a large city.
_____ Medium city (50,000 to 100,000).
_____ Small city (10,000 to 50,000).
_____ Town (under 10,000).
_____ Rural area or farm.

36. How would you describe your vision?
_____ NO useable vision
_____ VERY LITTLE USEABLE vision
_____ QUITE A BIT of useable vision

37. Are you legally blind? _____ YES _____ NO

38. About how old were you when your visual disability BEGAN to affect your daily activities? _____ YEARS OF AGE or _____ BIRTH

39. Did you have a job at the time when your visual disability BEGAN to affect your daily activities? _____ YES _____ NO

40. How long have you held your CURRENT job?
_____ Number of YEARS or _____ Number of MONTHS

41. How long have you been employed since onset of your visual disability?
_____ Number of YEARS or _____ Number of MONTHS

42. How long have you been employed for your entire life?
_____ Number of YEARS or _____ Number of MONTHS

43. How old are you now? _____ YEARS OF AGE

44. Did you lose your sight suddenly, gradually, or at birth?
_____ SUDDENLY or _____ GRADUALLY or _____ BIRTH

45. At this time, is your vision getting worse, improving, or staying about the same?
_____ Getting WORSE
_____ IMPROVING
_____ Staying about the SAME

46. Do you have any major health problems or disabilities that affect your work activities? Please describe any major health problems.

47. Many people make decisions about their lifestyles when trying to find or keep a job. For example, a person may move from an area with few jobs to an area where more jobs are available. Have you made similar lifestyle choices, but ones influenced mainly by your visual disability? Please explain.

48. Why do you think YOU were successful in overcoming barriers to employment when many individuals are NOT successful?

49. What suggestions do you have for others who are visually disabled and want to work?

Thank you for participating in our survey. Please return your completed survey in the enclosed business reply envelope or mail the results to Dr. Adele Crudden, P.O. Drawer 6189, RRTC on Blindness and Low Vision, Mississippi State University, MS State, MS 39762. If you have any questions about the survey, call 1-800-675-7782

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